Detroit Pharmacal Company.

MEDICAL AND SURGICAL SUPPLIES

CATALOGUE

OF

Physicians' Supplies,

INCLUDING

Drugs and Chemicals, Dispensing Supplies,
Pharmaceuticals, Surgical Instruments,
Electric Apparatus, Trusses
and Appliances.

MANUFACTURED, IMPORTED AND SOLD BY

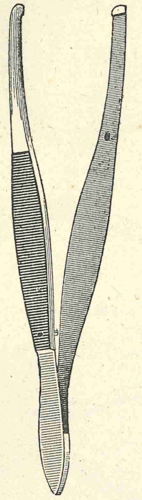
Detroit Pharmacal Company,

95 AND 97 WOODWARD AVENUE,

DETROIT, MICH.,

U. S. A.

Dermatological Instruments.



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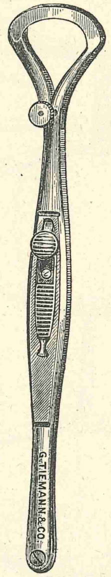
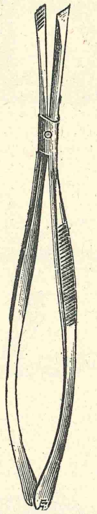

G.TIEMANN & CO.

1477



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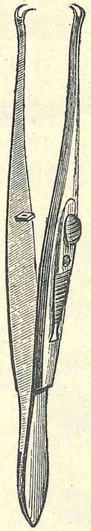

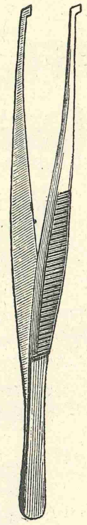

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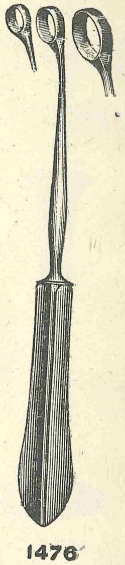

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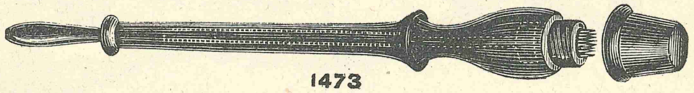

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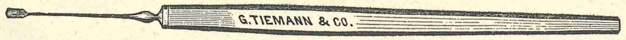
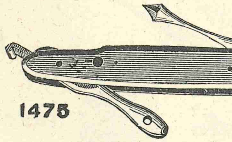

G.TIEMANN & CO.

1483



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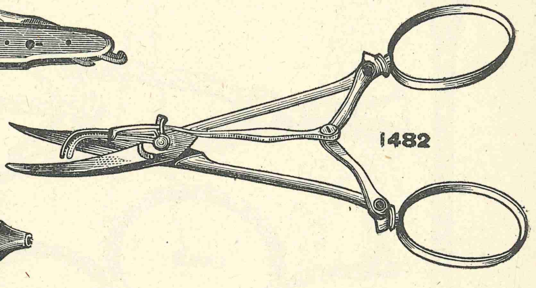

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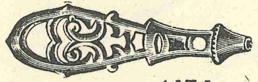

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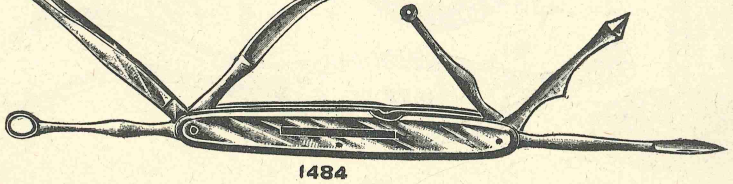


1484

Electrical Apparatus—Discounts and Prices.

We are prepared to furnish Electrical Apparatus of almost any description at regular market rates. Space forbids a complete list of many different batteries, accessories, supplies, etc., yet we can provide almost anything you may desire, and are prepared to send complete catalogue of different manufactures, together with special quotations.

When ordering accessories, such as electrodes, handles, cords, etc., be sure and specify for what make of apparatus you desire them, and thus secure exactly what you want without delay.

BATH APPARATUS: McIntosh, page 418	discount 25 per cent.	
CELLS: Page 478-479		
CARBONS: Page 394		
CHARGING MACHINE: Ranney's, net		$50 00
COILS: Flemmings, without cells, net		24 00
McIntosh, with cords and metal handles, no cells		4 00
CORDS: Page 394		
CURRENT ADAPTER: Vetter's, page 472		
CURRENT COMBINER: Flemming's, net		8 00
CURRENT CONTROLLER: Chloride Silver Dry Cell Battery Co., page 449, net		
Vetter's. page 471, net		15 00
Law, net		12 00
ELECTRODES:		
McIntosh's, pages 394, 397, 417	discount, 25 per cent.	
Flemmings, page 463	discount, 20 per cent.	
Waite & Bartlett	discount, 25 per cent.	
Galvano Faradic Co.	discount, 25 per cent.	
FLUID FOR BATTERIES: Page 480 for formula and prices		
INDUCTION APPARATUS: Holtz, page 475	discount, 25 per cent.	
Tripier, page 398	discount, 25 per cent.	
LARYNGOSCOPE: With conducting cords and rheostat, in Morocco case, net		11 25
Only, McIntosh, net		7 50
LAMPS: Electrode, ½ 1, 2 or 3 candle power	each	1 25
ILLUMINATOR, Post nasal or laryngeal, with cords and ½ c. p. lamp, net		6 00
For throat and ear, or examination of cavities, with condenser, net		8 00
MILLIAMPERE-METERS:		
Chloride Silver Dry Cell Battery Co., page 447, net		
Flemming's, capacity from ½ to 1000 M. A., net		20 00
Galvano Faradic Mfg. Co., page 425	discount, 25 per cent.	
McIntosh, page 405,	discount, 25 per cent.	
Vetter, page 471, net		
Waite & Bartlett, No. 2, net		20 00
RHEOSTATS:		
Flemming's, cautery, page 465	discount, 20 per cent.	
Galvano Faradic, page 428	discount, 25 per cent.	
McIntosh, hydro-platinum, net		15 00
" water rheostat, net		4 50
" new carbon, net		7 50
" for storage cautery battery, net		7 50
Voelkner, for Edison current, page 473 net		7 50

ELECTRICAL APPARATUS—DISCOUNTS AND PRICES.

SWITCH BOARDS: See table plates, batteries, etc.		
BATTERIES, CAUTERY:		
Feddern, page 395, net		$17 00
Flemming, page 464-5	discount, 20 per cent	
Galvano-Faradic Co., page 424	discount, 25 per cent.	
McIntosh, page 411	discount, 25 per cent.	
" stationery, cautery, net.		54 90
BATTERIES, GALVANIC & FARADIC COMBINED:		
Chloride of Silver Dry Cell Battery Co., page 445, net		
Galvano-Faradic Co., page 423	discount, 25 per cent.	
Flemming's, page 461	discount, 20 per cent.	
McIntosh, page 401	discount, 25 per cent.	
Vetter, page 472, net		
BATTERIES, FARADIC:		
Chloride of Silver Dry Cell Battery Co., page 451-460, net		
Detroit Universal, page 395, net		
Family, page 479, net		
Flemming, page 462	discount, 20 per cent.	
Galvano-Faradic Co., page 426	discount, 25 per cent.	
" " " page 427, prices are net		
McIntosh, page 399	discount, 25 per cent.	
Vetter, pages 469-470, net		
Voelkner, page 473, net		
Waite & Bartlett's, page 475	discount, 25 per cent.	
BATTERIES, GALVANIC:		
Chloride of Silver Dry Cell Battery Co , pages 435 to 443, net		
Flemming's, pages 461-463	discount, 20 per cent.	
Galvano Faradic Co., pages 422, 423, 425	discount, 25 per cent.	
McIntosh, page 400	discount, 25 per cent.	
Vetter, page 468, net		
Waite & Bartlett, page 474	discount, 25 per cent.	
CABINETS:		
Galvano-Faradic, page 420, prices net		
Law, pages 466-7	discount, 20 per cent	
McIntosh, send for complete catalogue, page 404	discount, 25 per cent.	
Waite & Bartlett, page 474	discount, 25 per cent.	
BATTERIES, MISCELLANEOUS:		
Electric Magnetic Machine, Galvano-Faradic Co., p 426,	discount, 20 per cent	
Electric Light Battery, Galvano-Faradic Co., page 429,	discount, 20 per cent.	
Vetter's dry auxilary, page 469, net		
BELTS, ELECTRIC:		
Owen's, page 476	discount, 20 per cent.	
Judd, page 477, net		
MOTORS: Galvano-Faradic Co., page 428	discount, 20 per cent.	
STATIC MACHINES:		
Galvano-Faradic Co., page 419, prices net		
McIntosh, page 396	discount, 25 per cent.	
Waite & Bartlett, page 475	discount, 25 per cent.	
TABLE PLATES:		
McIntosh, pages 402-403	discount, 25 per cent.	
Galvano-Faradic, page 421	discount, 25 per cent.	
Vetter, page 472, net		

Electrodes and Extras.

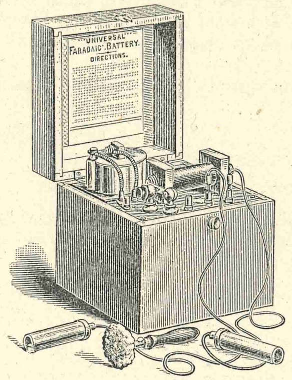
We are prepared to supply electrical accessories, such as Electrodes, Conducting Cords, Cells, Insulated Wire, etc., etc., at lowest market rates. Space forbids a complete list, so we give you below approximate figures on material for repairs, and a short list of Electrodes not illustrated.

When ordering, be careful to specify plainly the make of battery, number or name, also kind of article wanted.

ELECTRODES—Prices net:		
Tongue depressor and electric illuminator, to be attached to the McIntosh		$4 50
cautery handle, net		1 15
Tongue depressor, plain, Waite & Bartlett's, net		2 25
Intra uterine, Golet's three tipped, net		
ELECTRODES, FLEXIBLE GAUZE:		24
2x 3, net		36
1½x 8, net		30
3x 4, net		36
3x 5, net		38
4x 5, net		53
5x 7, net		60
6x 6, net		70
6x 8, net		75
6x12, net		90
8x12, net		
MATERIAL FOR REPAIRS.	each, from 15 cents to	50
CARBONS: Faradic	each, from 10 cents to	25
Galvanic	each, from 15 cents to	25
BINDING POSTS:	each, from 10 cents to	30
BRIDGES: For connecting zinc and carbon	each, from 50 cents to	3 00
CELLS: Rubber	each, from 15 cents to	50
Glass		
See also pages 429, 478 and 479.	per pair, $2.00 to	4 00
CORDS: Cautery	per pair, 60 cents to	1 00
Ordinary		3 00
Rubber covered, 10 feet long	per yard	12
Conducting	per yard	20
" green silk	per pair	85
" bifrucated, McIntosh		
CHEMICALS: See list of chemicals	per pair	1 25
HANDLES: With sponges	per pair	65
Metal		1 05
PLATINUM: Wire loop for cautery		65
SPONGE DISCS:		55
Recovering		
WIRE: At market rates	each, 8 cents to	25
ZINCS: Faradic	each, 12 cents to	25
Galvanic	each, 12 cents to	1 00
Cautery	per oz.	10
BI-SULPHATE MERCURY:	per lb.	18
BI-CHROMATE OF POTASH:	per lb.	33
BI-CHROMATE OF SODA	per oz.	17
CHROMIC ACID: Cryst	per lb.	08
SULPHATE COPPER:		
SULPHATE ZINC:	ground, per lb., 25 cents; crystal, per lb.	10
SAL AMMONIAC:	pure, per ib., 20 cents; lump, per lb.	15

DETROIT

FLEXIBLE,
GRADUATING,
CURRENTS.



DRY CELL,
AUTOMATIC,
RELIABLE.

No. 1.

UNIVERSAL FARADIC BATTERY.

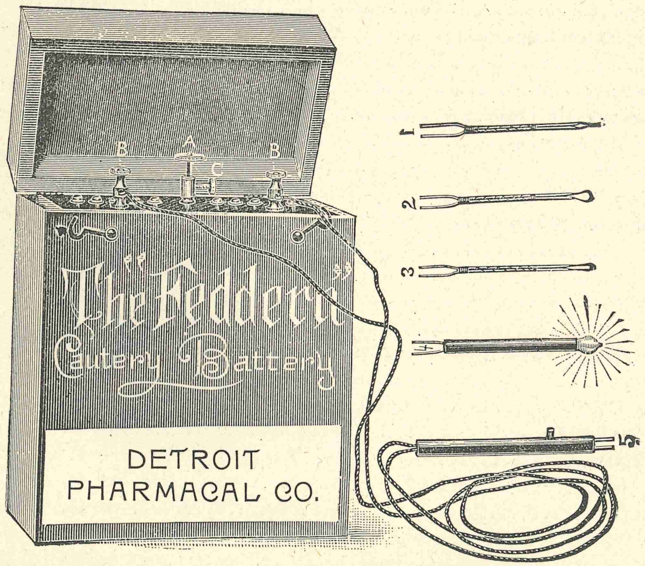
No. 1	$10 00
No. 2	9 00

MANUFACTURED BY

DETROIT ELECTRICAL WORKS, DETROIT, MICH.

TRADE SUPPLIED BY DETROIT PHARMACAL COMPANY.

Catalogues on Application. See page 393.



THE FEDDERN CAUTERY BATTERY

This Battery is far superior to any of the cheap Cautery Batteries in the market, besides being lower in price.

In addition to the Cautery Electrodes, we supply a small electric lamp, which will be found invaluable for illuminating any of the cavities of the body.

Price of Battery with Conducting Cords, Universal Handles with interrupting button, one Cautery Poiut, one Cautery Curette and one Cautery Knife:

Net	$18 00
Electric Lamp ......extra	3 50

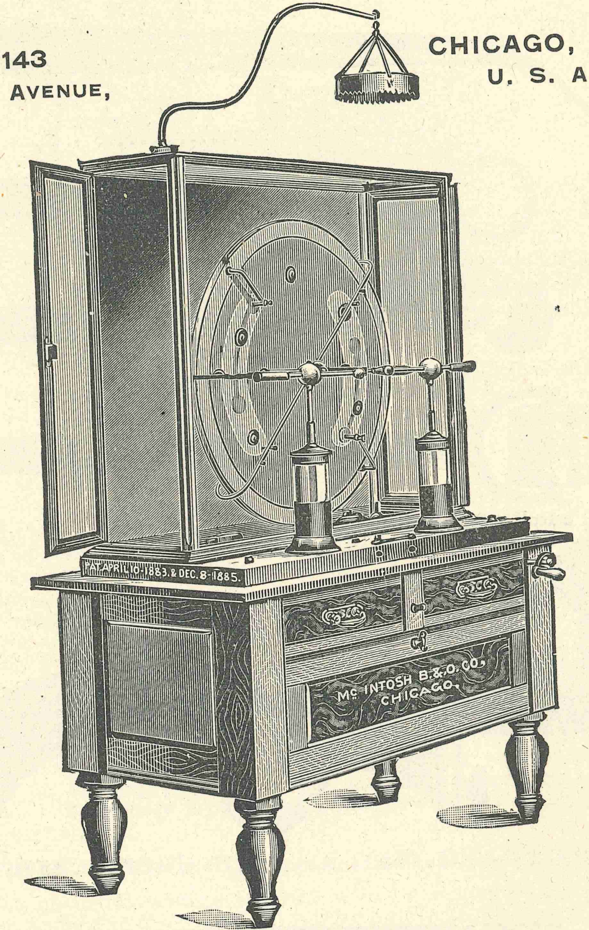
See page 393.

McINTOSH BATTERY AND OPTICAL CO.

141-143
WABASH AVENUE,

CHICAGO, ILL.
U. S. A.

☞ Discount to Physicians **25** per cent on all goods, except such items as we have named at net prices.


PAT. APRIL 10-1883 & DEC. 8-1885.
McINTOSH B.&O. CO.
CHICAGO.

Price of 4 Plate, Atkinson Toepler Electric Machine, as shown in above cut	$300 00

PRICE OF ATKINSON'S TOEPLER ELECTRIC MACHINE. WITHOUT GLASS CASE.

Machine with two Glass Plates, 16 and 18 inches in diameter	$ 60 00
Machine with four Glass Plates, 16 and 18 inches in diameter	100 00
Machine with two Glass Plates, 25 and 28 inches in diameter	125 00
Machine with four Glass Plates, 25 and 28 inches in diameter	200 00

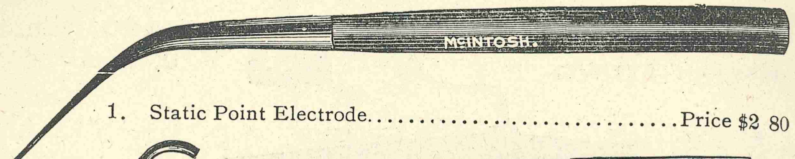
See page 393.

SEND ORDERS TO

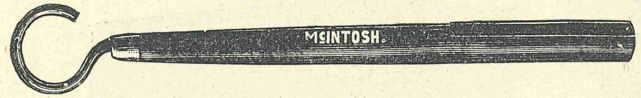
DETROIT PHARMACAL COMPANY.

ELECTRODES AND ACCESSORIES FOR STATIC MACHINE.

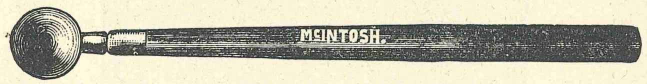
SINCE STATIC ELECTRICITY has great tension, special electrodes are required for its therapeutic application, which are represented by the following cuts:



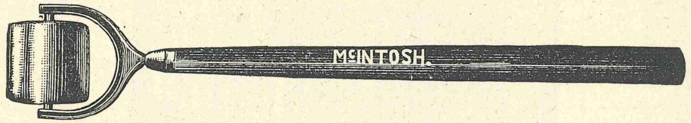
1. Static Point Electrode..............................Price $2 80



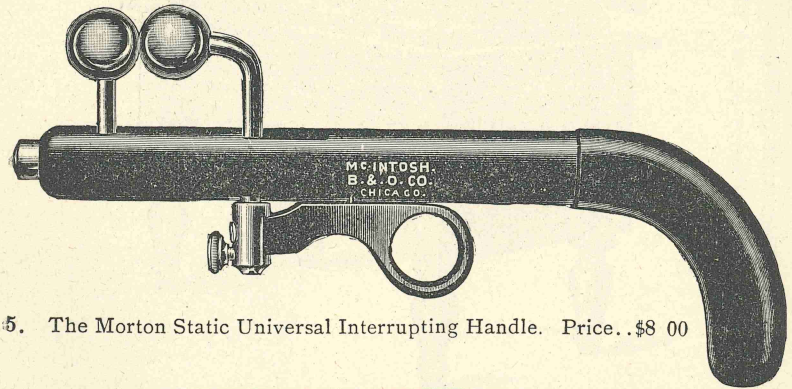
2. Hard Rubber Insulating Handle and Ring...................Price $2 00



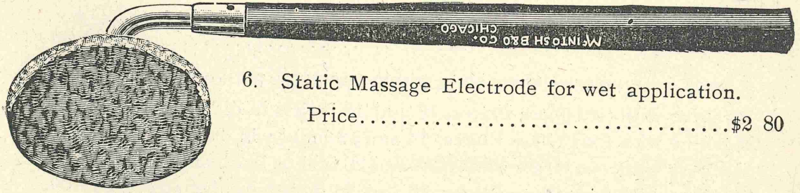
3. Static Ball Electrode..Price $2 40



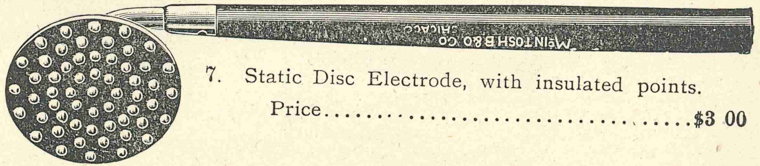
4. Static Roller Electrode...Price $4 00



5. The Morton Static Universal Interrupting Handle. Price..$8 00



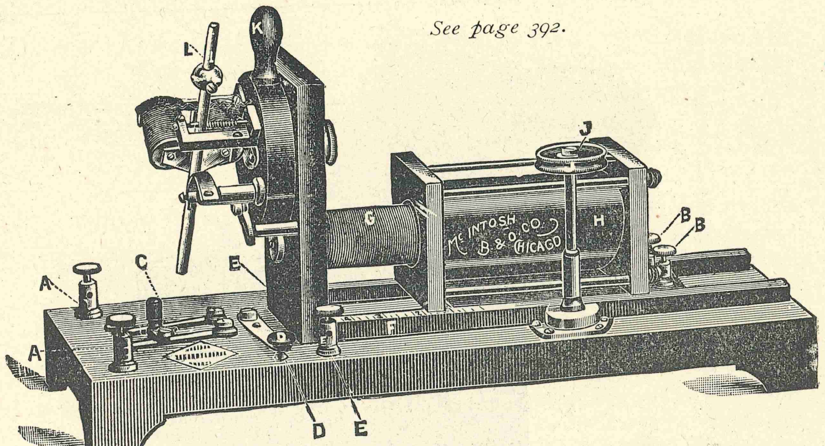
6. Static Massage Electrode for wet application.
Price..................................$2 80



7. Static Disc Electrode, with insulated points.
Price..................................$3 00

See page 392.

See page 392.



TRIPIER INDUCTION APPARATUS.

Used by Dr. Apostoli, Dr. Ranvier, and Other Eminent Specialists.

Price with three coils, without cells	net, $75 00
" as above, including 6 axo cells	" 80 00
" including Partz Motor Battery and sulpho-chromic salt	" 80 00

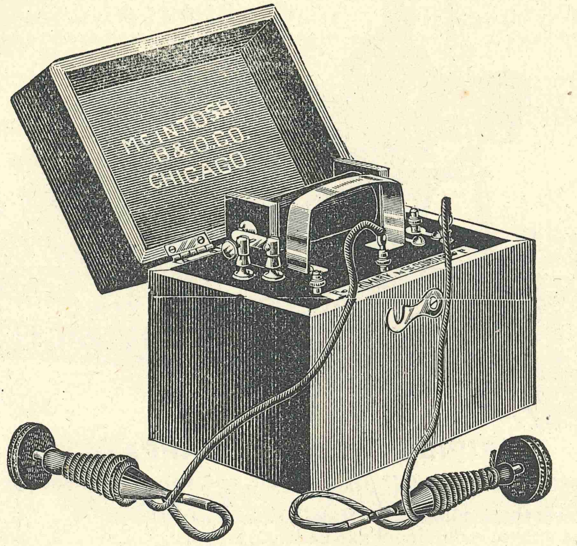
This apparatus is furnished with three coils of different thickness and length of wire: one of which (H) is shown in the cut. A, A, are the binding posts to which the cells or battery is attached. B, B, the posts to which the cords going to the patient are attached. C, the pole changer or commutator. D, contact button, which, when pressed, stops the current. E, E, posts for taking the current from the primary coil. F, graduated scale. G, primary coil. J, rack and pinion for sliding the secondary coil backward and forward over the primary. The more the primary coil is covered by the secondary, the more intense will be the current. K, handle by which to increase or decrease the number of interruptions made by the bar L. By moving the handle, K, *from* the operator the interruptions are *slower*, and *vice versa*, permitting a variation of from 50 to 3000 interruptions per minute, and is used principally for allaying pain, (especially within the uterus) by producing anæsthesia of the sensory nerves, for exciting the deeper seated fascia in paralysis, atrophy, etc.

VALUABLE BOOKS FOR THE BUSY PRACTITIONER.

If you desire to become familiar with the principles of electrical science, as applied in the everyday practice of Electrotherapy, send to us for the following publications:

HAYNES' Elementary principles of ELECTRO-THERAPEUTICS, - - - - - - Price, post-paid,	$2.00
HAYES' ELECTRICITY, the methods of its employment in REMOVING SUPERFLUOUS HAIR and other facial blemishes, - - - - Price, post-paid,	$1.00
BEARD & ROCKWELL'S MEDICAL ELECTRICITY, Price post-paid, in cloth, - - - - -	$5.50
" in sheep, - - - - - -	$6.50
ATKINSON'S STATIC ELECTRICITY, - Price, post-paid,	$1.50
ATKINSON'S DYNAMIC ELECTRICITY AND MAGNETISM, Price, post-paid, - - - - -	$2.00
MARTIN'S MEDICAL AND SURGICAL ELECTRICITY in diseases of women and obstetrics, - Price, post-paid,	$2.00
BIGELOW'S PLAIN TALKS ON MEDICAL ELECTRICITY AND BATTERIES, - - - Price, post-paid,	$1.00

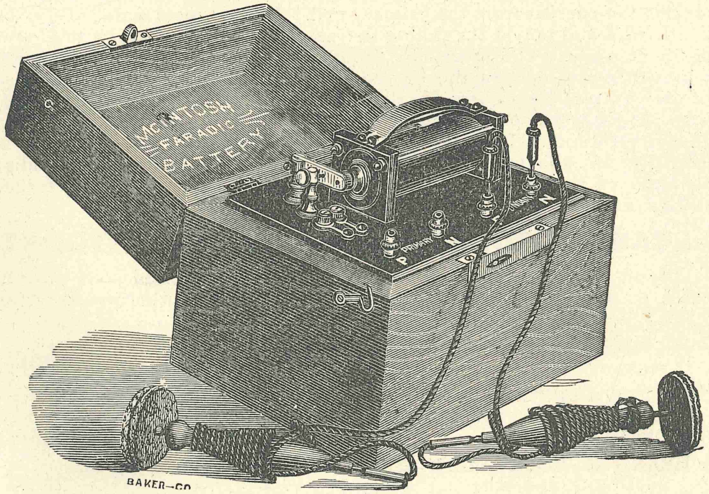
A Small Book of Directions Accompanies This Battery.



McINTOSH FAMILY FARADIC BATTERY.

Price..$10 00

It is made on the same principal as our higher-priced Faradic batteries, and is portable. It is not intended to take the place of the Physician's battery, but for domestic use.



McINTOSH PHYSICIAN'S FARADIC BATTERY.

Price of battery with first-class sponge electrodes, and our new cable conducting cords....................................$18 00

This battery is put up in a neat, polished black-walnut case, six inches in width, nine inches in length and seven inches in height, and weighs less than six pounds charged. All the metal work is nickel-plated.

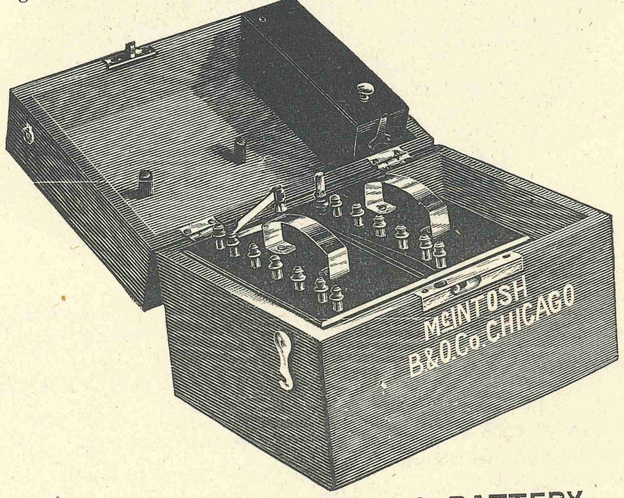
It is very convenient for a physician's visiting battery or family use, as it is light and perfectly portable and gives sufficient strength to treat any case where the Faradic or induced current is needed.

This is a very choice and desirable portable Faradic battery.

Physician's Faradic Battery, No. 3.............................. $30.00

A GALVANIC BATTERY

Consists of a series of cells each containing a pair of dissimilar metal plates and an exciting fluid. The connections should be simple and so firmly attached that they cannot become disarranged accidentally. The surface of contact between elements and connections should be comparatively large, so as to offer no obstruction to the passage of electricity; the distance between elements should be small, to lessen the resistance of the fluid; the cells should be so arranged and connected that any one or more in the series may be used at will, since a defective element or exhausted fluid in one cell in series will reduce materially the total strength of the current; this method of arrangement also enables the operator to use up the zincs and fluid uniformly, thus making a battery of a given number of cells last more than twice as long without recharging as when the first cells in series must always be included in circuit.



TWELVE-CELL GALVANIC BATTERY.

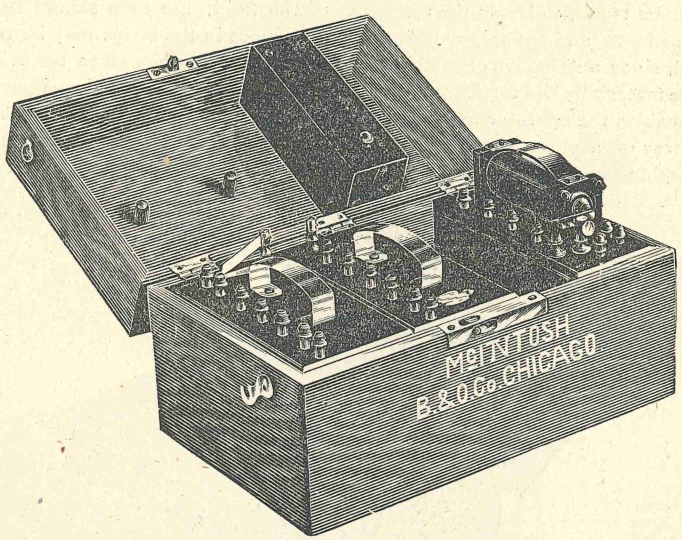
In a polished black-walnut case, 10½ inches long, 8¼ inches wide, 7¼ inches high, metal work, all nickel-plated, lock and handle sponge electrodes, cable conducting cords and hard-rubber electrode box. This is a very convenient visiting Battery, as it weighs only eleven pounds, and gives a galvanic current of sufficient intensity to treat any case where it is indicated.

Twelve-Cell Galvanic Battery..................................	Price,	$30.00
Eighteen-Cell Galvanic Battery..................................	Price,	40.00
Twenty-four-Cell Galvanic Battery..............................	Price,	55.00

The McIntosh Batteries and Electrodes are used by the United States Government at all the army posts and hospitals throughout the country.

A COMBINED GALVANIC AND FARADIC BATTERY

Consists of two distinct batteries inclosed in one case, for convenience in carrying. A Combined Battery should be light in weight, so that it can be comfortably handled. It should be simple in construction, so that those not gifted with mechanical training can understand how to manage it. It should be easily cleaned and kept in order, so that it may be intrusted to an unskilled attendant for charging, cleaning and recharging. It should consist of two distinct instruments in one case, so that each battery can be used the same length of time without recharging, which is not the case when the same cells must produce both kinds of electricity.



TWELVE-CELL COMBINED GALVANIC AND FARADIC BATTERY.

Same style of case and finish as the above, 13½ inches long, 8¼ inches wide, 7¼ inches high, with first-class Faradic Coil, polished hard-rubber ends and cover, extra large cell to run the coil, electrodes, our new cable conducting cords and hard-rubber electrode box. This Battery gives a galvanic current same as above described, and a Faradic current of sufficient strength to treat any case.

Twelve-Cell Combined Galvanic and Faradic Battery..........Price,	$40.00
Eighteen-Cell Combined Galvanic and Faradic Battery.........Price,	52.50
Twenty-four-Cell Combined Galvanic and Faradic Battery......Price,	67.50

WE MANUFACTURE THE LARGEST LINE OF ELECTRODES FOR USE IN THE SCIENCE OF ELECTRO-THERAPY TO BE FOUND IN THE WORLD.

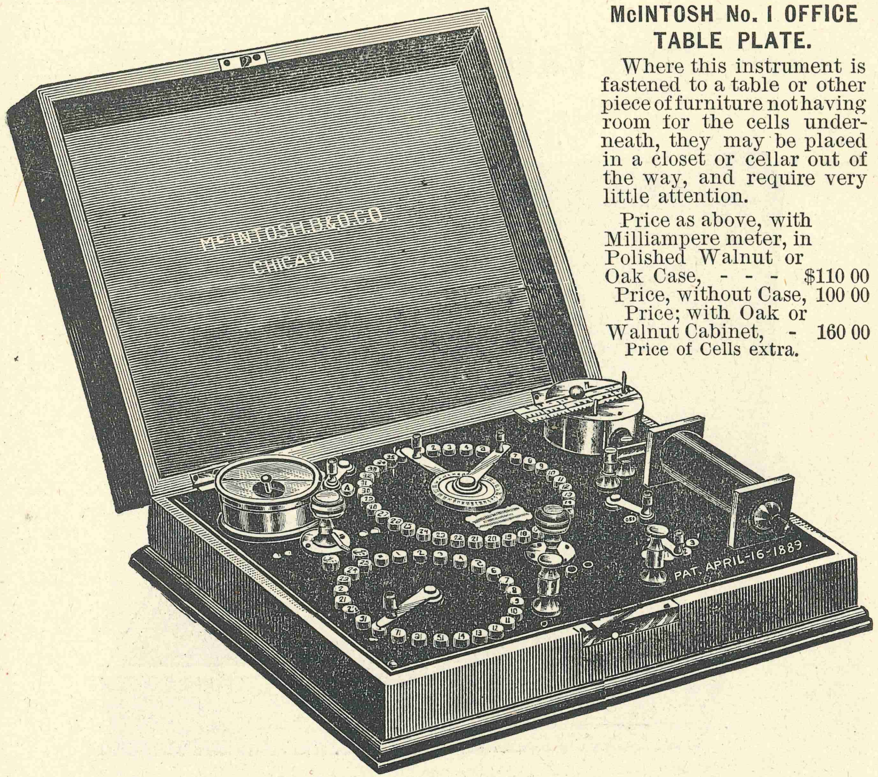
See page 393.

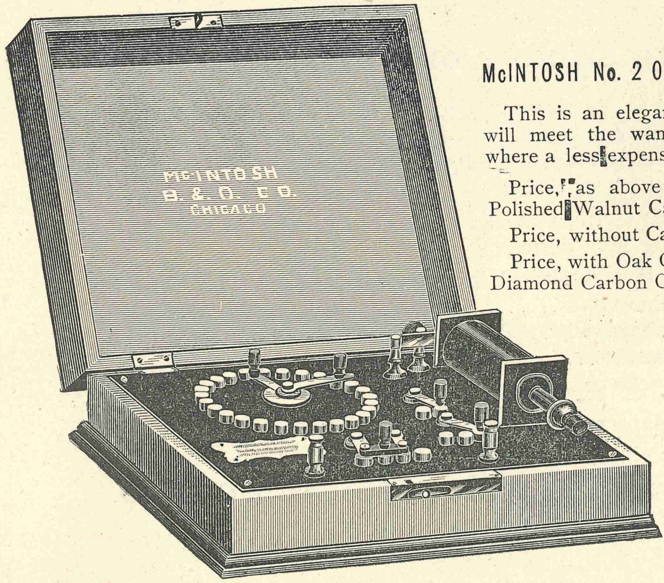
McINTOSH No. 1 OFFICE TABLE PLATE.

Where this instrument is fastened to a table or other piece of furniture not having room for the cells underneath, they may be placed in a closet or cellar out of the way, and require very little attention.

Price as above, with Milliampere meter, in Polished Walnut or Oak Case, - - -	$110 00
Price, without Case,	100 00
Price; with Oak or Walnut Cabinet, -	160 00

Price of Cells extra.





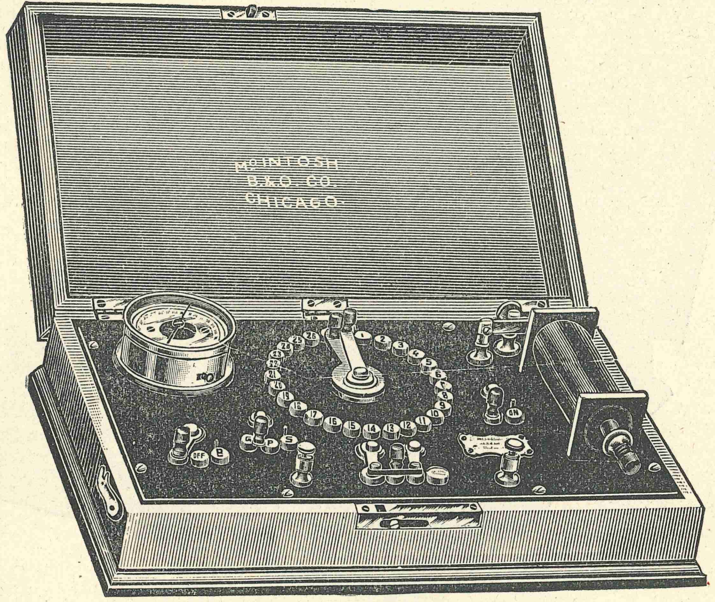
McINTOSH No. 2 OFFICE TABLE PLATE.

This is an elegant piece of work and will meet the wants of the profession where a less expensive battery is desired.

Price, as above described, in Polished Walnut Case, - - - -	$38 00
Price, without Case, - - - -	30 00
Price, with Oak Cabinet and 36 Diamond Carbon Cells - - - -	100 00

See page 393.

Table Plates.



McINTOSH NO. 4 OFFICE TABLE PLATE.

In addition to the accessories contained on the McIntosh No. 2 Office Table Plate, we furnish with this elegant plate, the McIntosh Milliamperemeter and controlling switch, all neatly arranged on polished hard rubber base, size 9x15½ inches.

The buttons of the galvanic circle are arranged for 40 or more cells as the purchaser may desire.

Price as above described, in mahogany case	$64 00
Price without case	55 00
Price as above, with polished oak cabinet and new carbon rheostat	100 00

Price of cells extra.

☞Compare our prices, and you will be convinced that we offer not only superior workmanship but the lowest price.

Send for our complete Electro-therapeutical Catalogue.

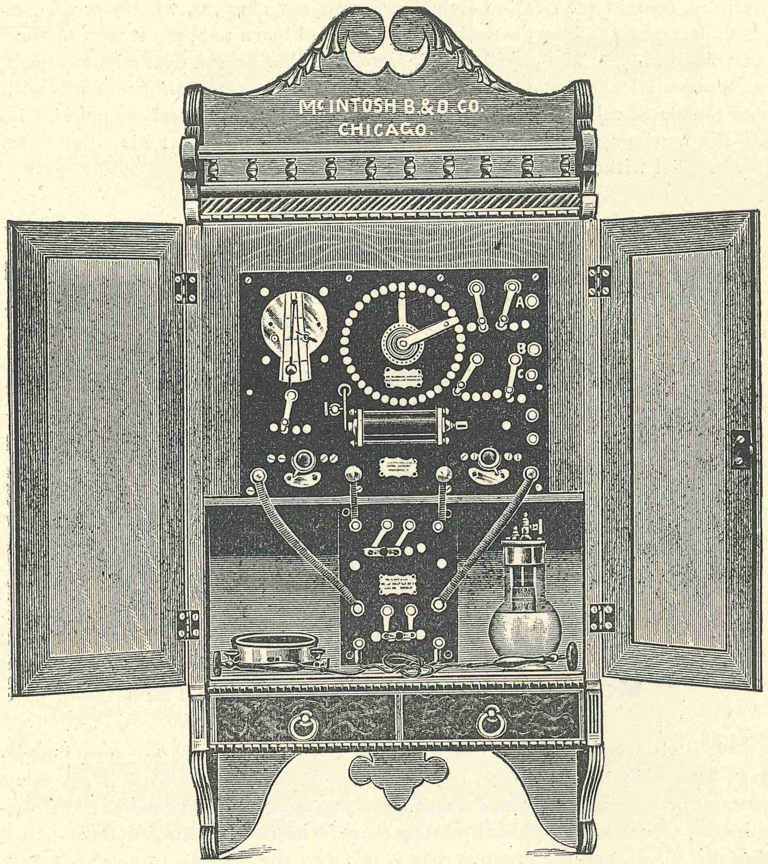
See page 393.

McINTOSH COMPLETE WALL PLATE,

WITH

DE WATTEVILLE CURRENT COMBINER,

IN WALL CASE.



In case of polished walnut or oak, with beveled plate glass doors, Hydro-platinum Rheostat and Milliampere meter connected in circuit.

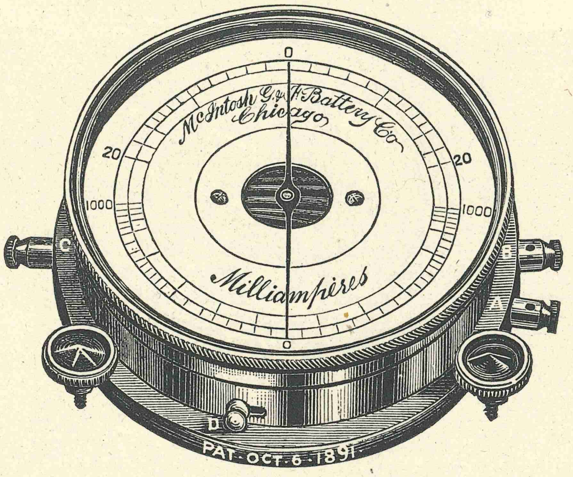
Price as shown in cut	$155 00
" without Rheostat or Milliampere meter	110 00
" as shown in cut, but with McIntosh New Carbon Rheostat instead of Hydro-platinum Rheostat	145 00

Price of cells extra.

See page 393.

THE VALUE OF ELECTRICAL MEASUREMENT.

Dr. Adams in his recent monograph on electricity, says: "In no science is a knowledge of general principles and natural laws so essential at every step as in the case of electrical science. Its laws are multiple, varied and complex, and a thorough understanding of them is necessary for a correct interpretation of the numerous phenomena which are ever and anon manifesting themselves." "Electricity, however, is a definite quantity capable of producing with uniformity, certain physical, chemical and nutrient changes, whenever we come to understand the laws governing its action and learn to apply it with methods of precision." "The physician who imagines that he can deal with electricity as a remedial agent and secure anything approximating uniform results without the use of reliable measuring instruments, will find himself as much at sea as the mariner without his compass, the carpenter without his rule, or the pharmacist without his scales."



McINTOSH MILLIAMPERE METER.

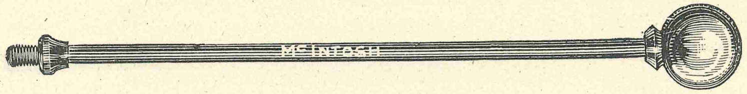
Diameter of base, 5½ inches. Price, $25.00.

It is now conceded that the Milliampere Meter is one of the most important factors in the treatment of diseases by electricity, as with it the exact amount or "dosage" of the current that passes *through* the patient is determined. Our instrument is absolutely correct, as it is graduated by standard measurements, and the greatest care is taken in the manufacture. There are two separate scales, the upper one is graduated from ½ to 20, and the lower one from 1 to 1000 milliamperes, so any range of current can be obtained.

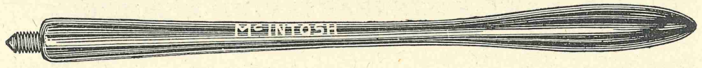
It can be used with any galvanic Battery, the patient being in circuit, and is not liable to get out of order. Hitherto the instruments designed for this purpose have been too delicate to withstand the effects of daily usage without frequent adjustment that could only be made by the manufacturer, and the great expense of those worthy of trial has deterred the profession from adopting them. These difficulties we believe to be obviated in the instrument here presented. Full directions accompanying each instrument.

See page 393.

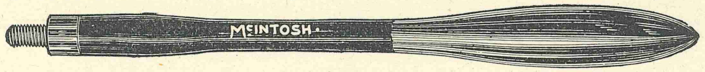
VALUABLE ELECTRODES FOR RECTAL, VAGINAL AND UTERINE TREATMENT.



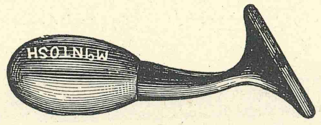
5. Ball Rectal Electrode (insulated)..................Price, $1.25.



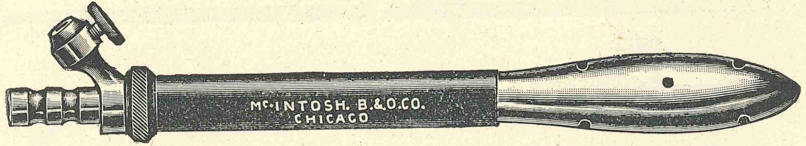
6. Rectal Electrode, nickel-plated....................Price, $1.00.



7. Rectal Electrode, insulated with Polished Hard Rubber.
Price..$2.00.



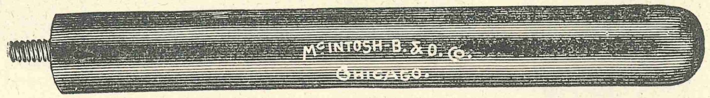
53. New Style Rectal Electrode, insulated...........Price, $2.50.



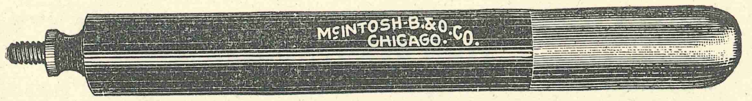
67. Syringe Rectal Electrode.........Price, including Capote $5.00.

This very valuable electrode is intended to be used in connection with a Capote, thus permitting the application of heat by warm water or any desired medicament to the mucous membrane, as also of such distension of the organ as may be desirable.

This Electrode is also admirably adapted for vaginal treatment.



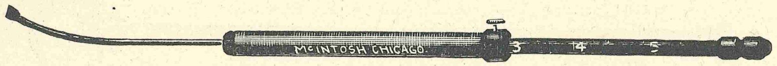
9 Vaginal Electrode, nickel-plated..................Price, $1.25.



10. Vaginal Electrode, insulated with Polished Hard Rubber.
Price..$2.50.

See page 392.

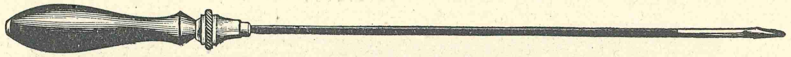
ELECTRODES SPECIALLY RECOMMENDED FOR USE IN GYNECOLOGICAL PRACTICE, BY THE APOSTOLI METHOD.


McINTOSH CHICAGO
3
4
5

57

57. DR. MARTIN'S INTRAUTERINE ELECTRODE.
(Platinum Stem.)

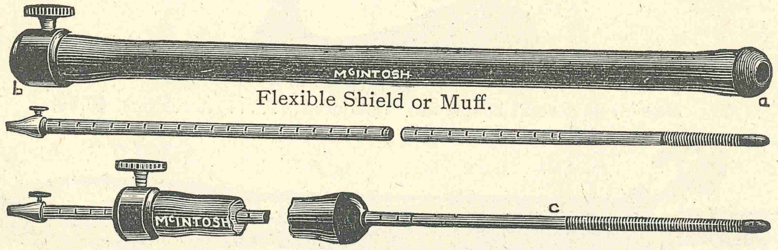
Price.. $8 00



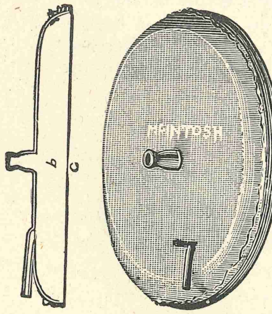
58

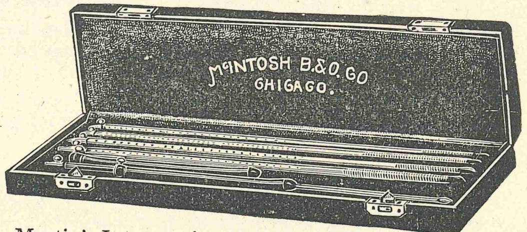
58. DR. MARTIN'S FIBROID NEEDLE.
(Platinum Point.)

Price..$2 50

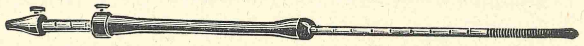

McINTOSH
b
a
McINTOSH
c

Flexible Shield or Muff.


McINTOSH
b
c


McINTOSH B.&O. CO.
CHICAGO.

Martin's Intrauterine Concentration Electrode Case.



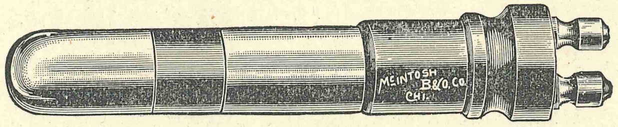
MARTIN'S FLEXIBLE INTRAUTERINE CONCENTRATION ELECTRODES.

For treatment of Fibroid Tumors of the Uterus by the "Apostoli" method.

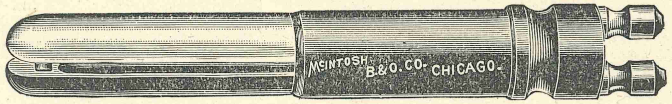
Set of four Martin's Concentration Electrodes in Plush-lined Morocco Case..$20 00
Price of one only, including the muff.............................. 6 00
Price of Rubber Muff only.. 75

See page 392.

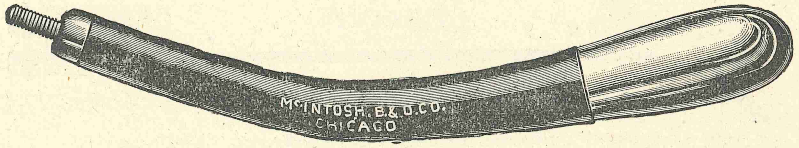
McIntosh Electrodes.


McINTOSH B.&O. CO. CHI.

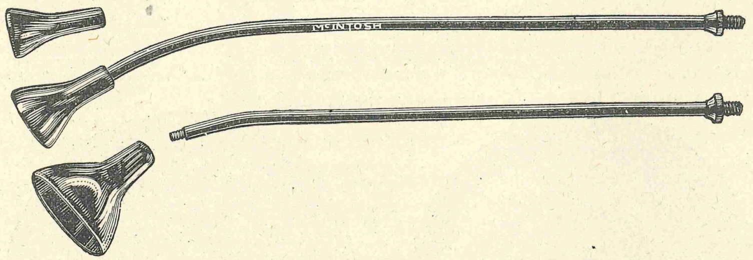
42. Vaginal Electrode for both currents, insulated in the center.
Price..$4.00.


McINTOSH B.&O. CO. CHICAGO.

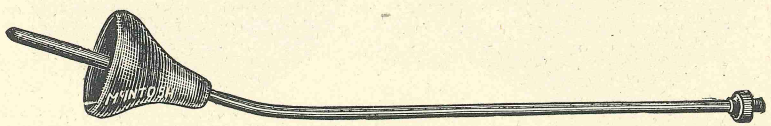
43. Vaginal Electrode for both currents, insulated in halves.
Price..$4 00


McINTOSH B.&O. CO.
CHICAGO

68. Curved Vaginal Electrode, insulated..............Price, $2 50



16. Cup-Shaped Electrode for Uterus, three sizes, insulated.
Price, each..$2 00
16. Cup-Shaped Electrode for Uterus, cup only...Price, each, $1 25



51. Uterine Electrode, with Cup and Stem, insulated...Price, $2 50
51. Uterine, Cup and Stem only.........................Price, $1 75

☞ NOTE.—The same staff that is used for No. 16 Electrode can be used with the No. 51 Cup and Stem.

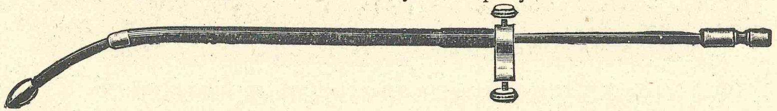
See page 392.

ELECTRODES

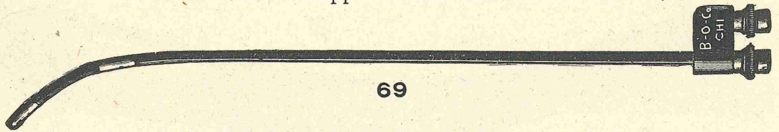
Martin's Intrauterine Concentration Electrode Case, contains :
1 Flexible Intrauterine Electrode, 3 C. M. for 50 M. A.
1 " " " " 3 C. M. for 100 M. A.
1 " " " " 5 C. M. for 50 M. A.
1 " " " " 5 C. M. for 100 M. A.
1 " Bougie, 3 C. M.
1 " " 5 C. M.
1 " Shield or Rubber Muff.
Price for the case complete $20 00

☞Note.—When the Martin's Intrauterine Concentration Electrodes require renewal, if the old Electrode with its Platinum wrapping is returned to us we will send a new one of same size at $1.25 net.

These repair charges must invariably accompany the order.



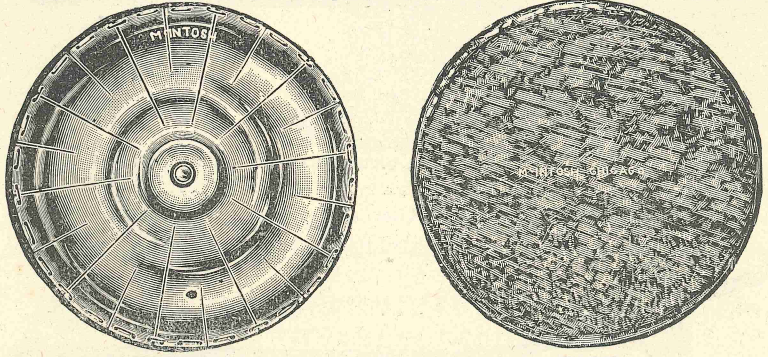
82. Improved Bipolar Intrauterine Electrode, with Platinum Olive and Platinum tipped flexible muff..........Price, $8 00



69

69. "Apostoli" Bipolar Intrauterine Electrode. Platinum Contacts......... ....Price, $8 00
59. Martin's Abdominal Membrane Electrode......... " 4 00

☞Note.—At the close of a treatment this electrode should be placed on a folded towel, the water remaining in it, a few grains of Bicloride of mercury being used as an antiseptic; removing the water and allowing the membrane to become dry, very quickly destroys it. If the damaged Electrode is returned to us we will renew the membrane at a cost of 75c. net. The cost of repairs must invariably accompany the order.



BACK. 66 FACE.

66. DR. P. S. HAYES' ABDOMINAL ELECTRODE—SPONGIO PILINE.

Price, Tinned Copper.........$2 00 Block Tin.........$2 50

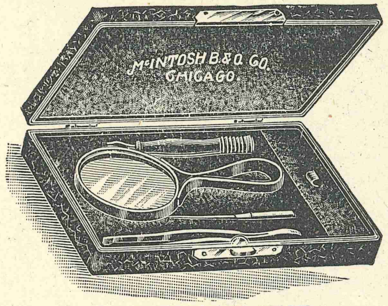
☞Note.—This Electrode should be thoroughly saturated with water and placed over the abdomen upon a piece of chamois skin which has been soaked in warm water

See page 392.

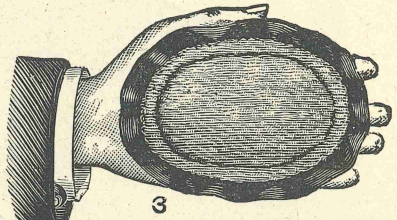
· SPECIAL ELECTRODES ·

... FOR USE IN ...

ELECTROLYTIC EPILATION.

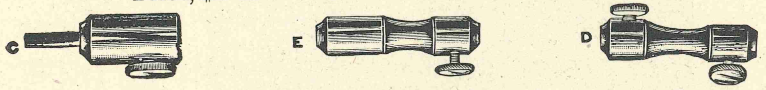


No. 2, NEEDLE CASE.
Price, $5 00

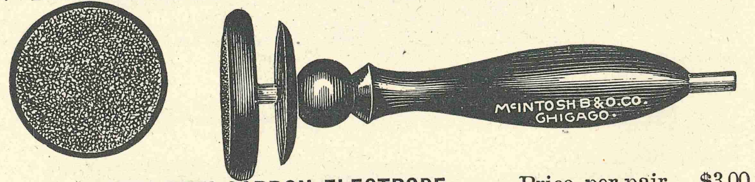


3

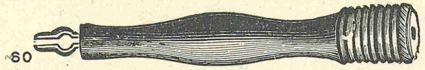
No. 3, HAND SPONGE ELECTRODE.
Price, $1.50.



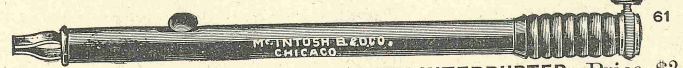
C. Universal Cord Tip Connector, to connect cord tips of any battery with McIntosh Battery................................25
E. Universal Electrode Connector, to connect Cord tips of any battery with the McIntosh Electrodes................................25
D. Double Connector for wires or cords................................25



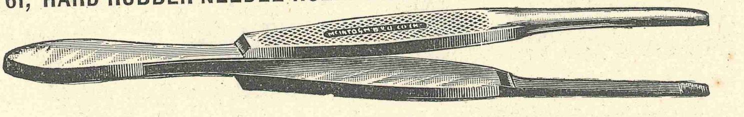
DR. McINTOSH'S NEW CARBON ELECTRODE. Price, per pair, $3.00.



HARD RUBBER NEEDLE HOLDER.
Price, $1.50.



No. 61, HARD RUBBER NEEDLE HOLDER WITH INTERRUPTER. Price, $2.00.

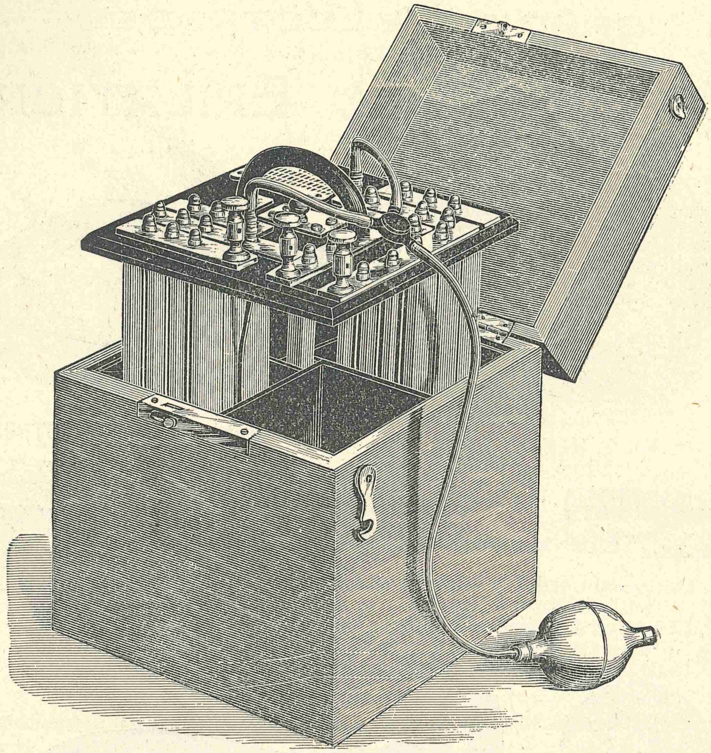


72

No. 72, Epilation Forceps................................Price 40

		PRICE.	POSTAGE.
Steel Needles for Removing Hair	each	$ .10	2c.
" " " "	per doz.	1.00	2c.
Improved Bulbous-Pointed Needles	each	.20	2c.
" " " "	per doz.	2.40	2c.
Iridio-Platinum Needles for Removing Hair	each	.40	2c.

See pages 392–3.

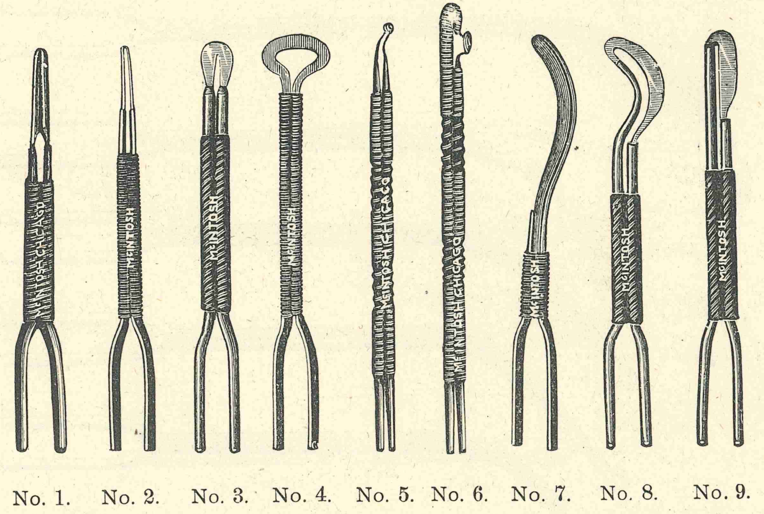


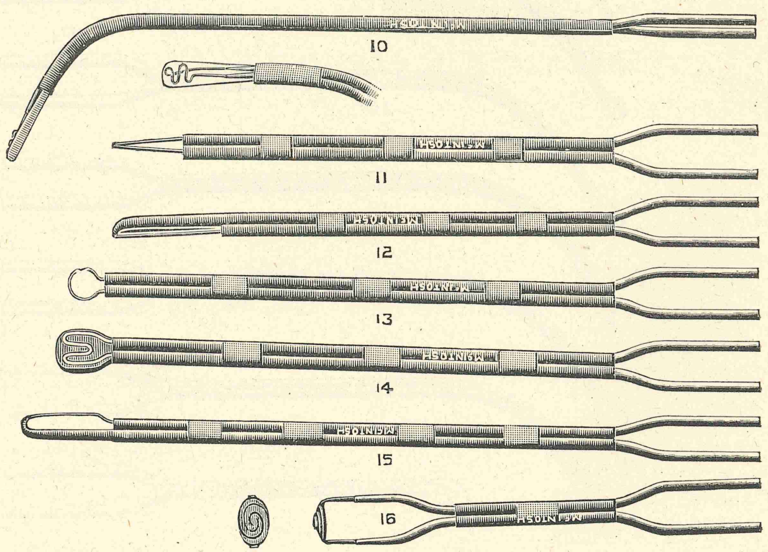
McIntosh Portable Galvano-Cautery Battery.

Price, $80.00.

This battery is designed expressly for cautery work. It is inclosed in a polished black walnut case, 8½ inches long, 8½ inches wide, and 10½ inches high, and weighs 21 pounds. The elements are composed of zinc and platinum, fastened upon a hard rubber base. They are constructed so as to furnish a very large surface in the smallest possible space, thereby lessening the resistance and increasing the power of the battery. The cells and drip cups are made of hard rubber. The base and elements can be fastened at any height by a spring bolt that slips into slots in a central upright metallic tube; by this means the current can be graduated to any required intensity. This battery is very compact, portable, and can be easily managed by any physician. It is adapted to all cases where galvano-cautery is applicable.

See page 393.


No. 1.
No. 2.
No. 3.
No. 4.
No. 5.
No. 6.
No. 7.
No. 8.
No. 9.

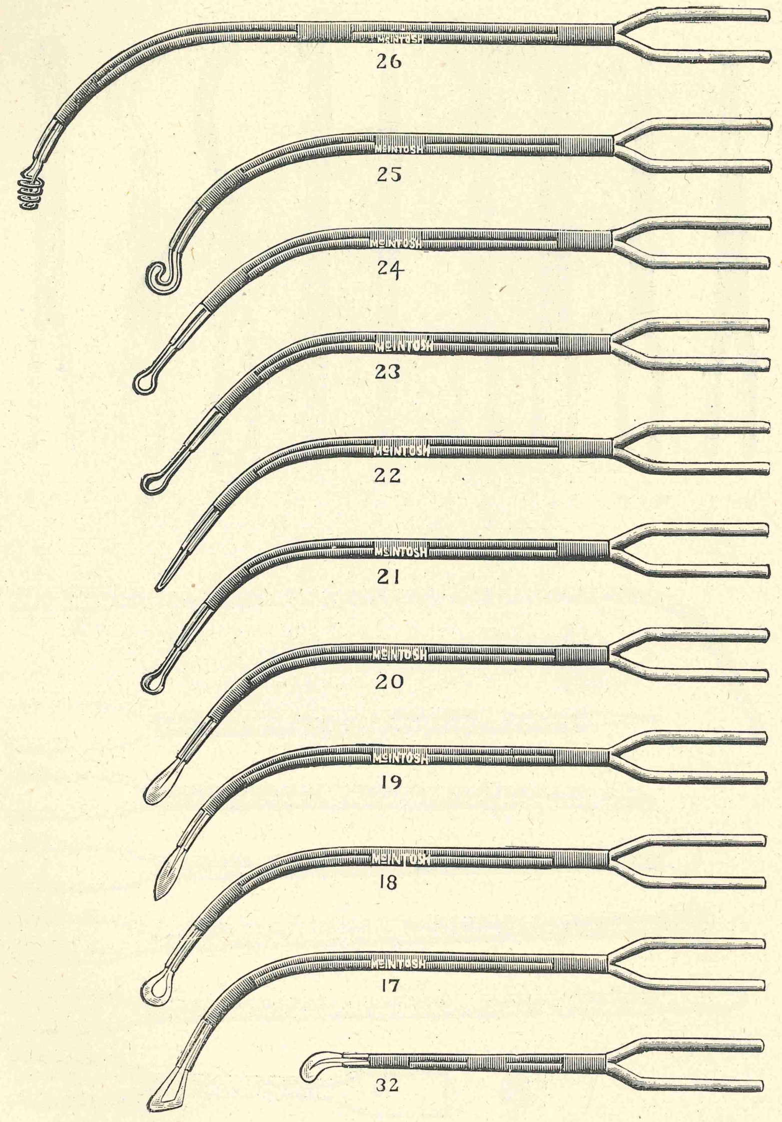


GALVANO-CAUTERY ELECTRODES.

Price of above, *except* Nos. 7, 8, 10, 14 and 16..........$2 00 each.
Price of Nos. 7, 8, 10, 14 and 16.....................$2 50 each.

Special forms of Galvano-Cautery Electrodes made to order.

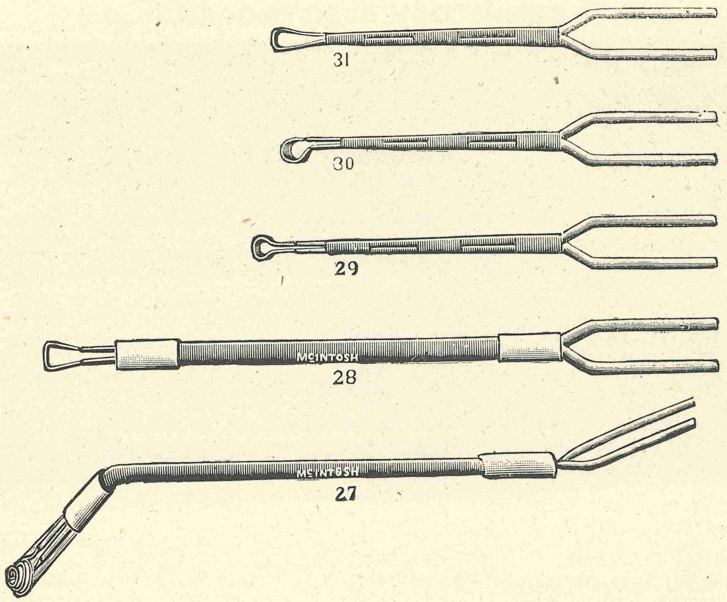
See page 392.



GALVANO-CAUTERY ELECTRODES,

LARYNGEAL CURVED.

SEE PRICES ON PAGE 414
See page 392.

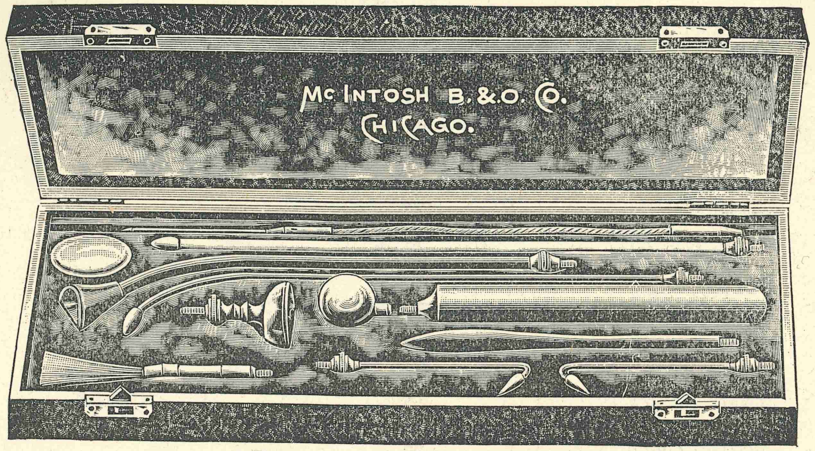


GALVANO-CAUTERY ELECTRODES.

17.	Oblique Knife Electrode	$2 50
18.	Knife Electrode, broad loop	2 50
19.	Knife Electrode, lancet	2 50
20.	Knife Electrode, flat	2 50
21.	Loop Electrode	2 50
22.	Point Electrode	2 50
23.	Curette Electrode, curved	2 50
24.	Curette Electrode, straight	2 50
25.	Spiral Flat Electrode	2 50
26.	Spiral Dome Electrode	2 50
27.	Bosworth's Post-Nares Electrode, with shield	3 00
28.	Bosworth's Naso-Pharynx Electrode	2 50
29.	Nasal, Curette Electrode, straight	2 00
30.	Nasal, Curette Electrode, curved	2 00
31.	Nasal, Square Knife Electrode, flat on top	2 00
32.	Nasal, Knife Electrode, curved	2 00

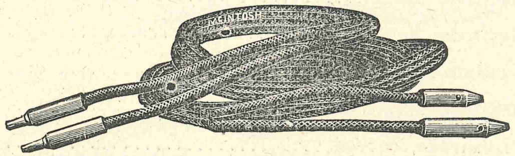
See page 392.

McINTOSH ELECTRODES.



GENERAL ELECTRODE CASE NO. 2.

Price		$12 50
	Case No. 2 contains:	
A.	Universal Sponge Holder	1 00
6.	Small Rectal Electrode	1 00
9.	Vaginal Electrode	1 25
21.	Urethral, Insulated	1 00
16.	Cup-shaped Uterine Electrode	2 00
17.	Metallic Brush	75
20.	Spiral Flexible U. Electrode	1 00
26.	Duchenne's Points, 1 pair	2 50
32.	Ball Electrode	50
33.	Disc Electrode	40
49.	One Needle and Holder	1 15
Morroco-covered, Velvet-lined Case		4 00



GALVANO-CAUTERY CORDS.

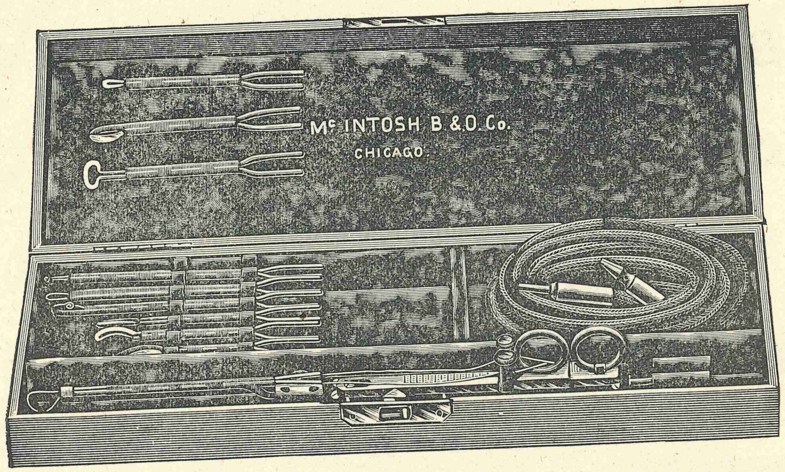
The powerful current required for galvano-cautery makes it necessary to have special cords with large conducting surface. The conducting cords furnished with ordinary batteries are inadequate to convey a cautery current.

The galvano-cautery cords furnished with the Portable Cautery Battery consist of a bundle of copper wire, insulated by a heavy silk cover, with large tips, which secure the ends of the wires, and offer no impediment to the passage of the current. These cords are very flexible, and being perfect conductors they do not become heated while the battery is being operated.

Price, per pair $3.50

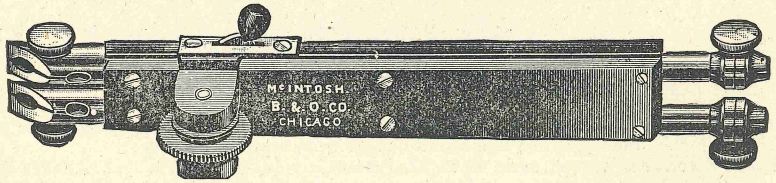
See page 392.

GALVANO-CAUTERY ELECTRODE CASE.



Price $30 00

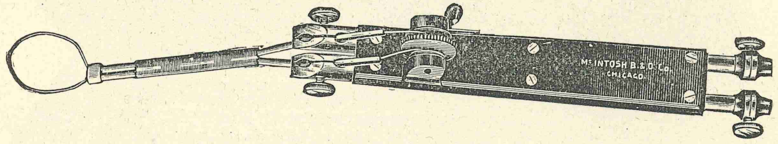
This case contains one pair of cautery cords, one cautery handle and ecraseur attachment, nine platinum electrodes and wire loop for ecraseur.



McINTOSH CAUTERY HANDLE WITH WHEEL ATTACHMENT FOR ECRASEUR.

This is the style of handle preferred by most surgeons.

Price, as shown in cut (without ecraseur attachment) $8 00



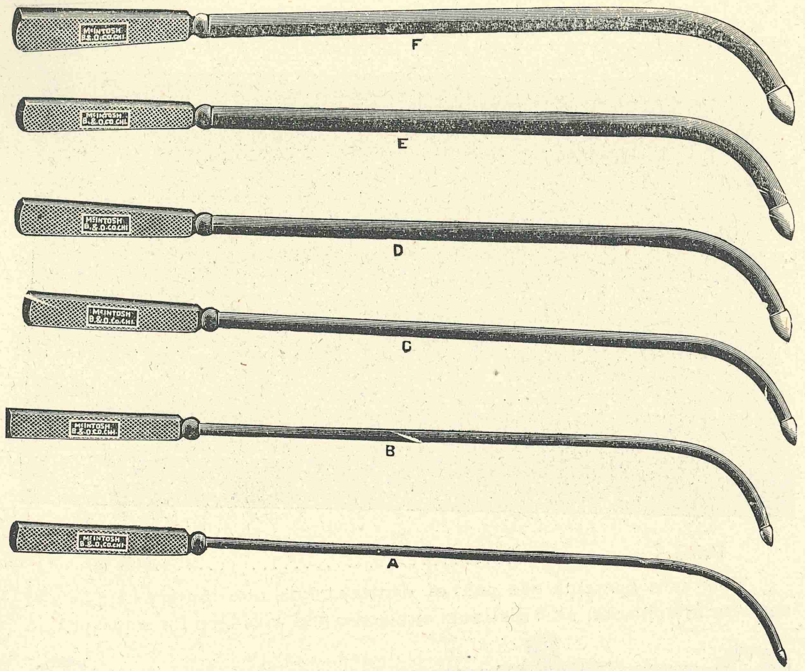
GALVANO-CAUTERY HANDLE WITH ECRASEUR ATTACHMENT.

This represents the Galvano-Cautery Handle arranged for the loop or ecraseur.

Price, complete as shown in cut		$10 00
Extra Platinum Wire Snares	each, net,	1 25

For other styles of Galvano-Cautery Handles see page 169.

See page 392.

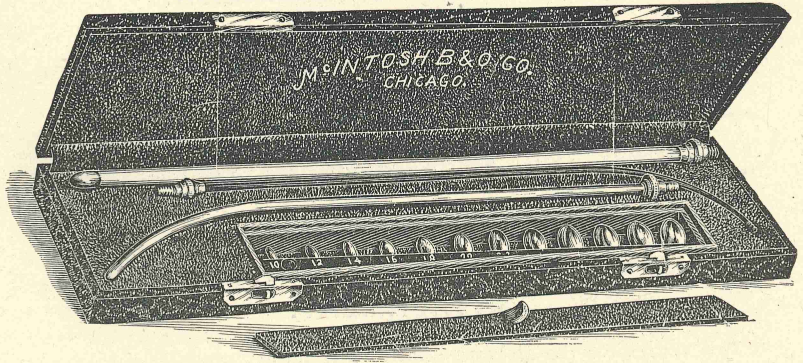


NEWMAN'S ELECTRODES

For the Treatment of Urethral Stricture by Electrolysis.

These Electrodes are made with the hard rubber insulation, vulcanized on to the metal stem, thus guarding against all danger from septic poisoning.

Newman's Electrodes, curved, sizes 10 to 27, French	each	$2 40
" in velvet-lined Morocco case	set of 6	15 00
Newman's Electrodes, straight, sizes 10 to 27, French	each	2 00
" in velvet-lined Morocco case	set of 6	12 00



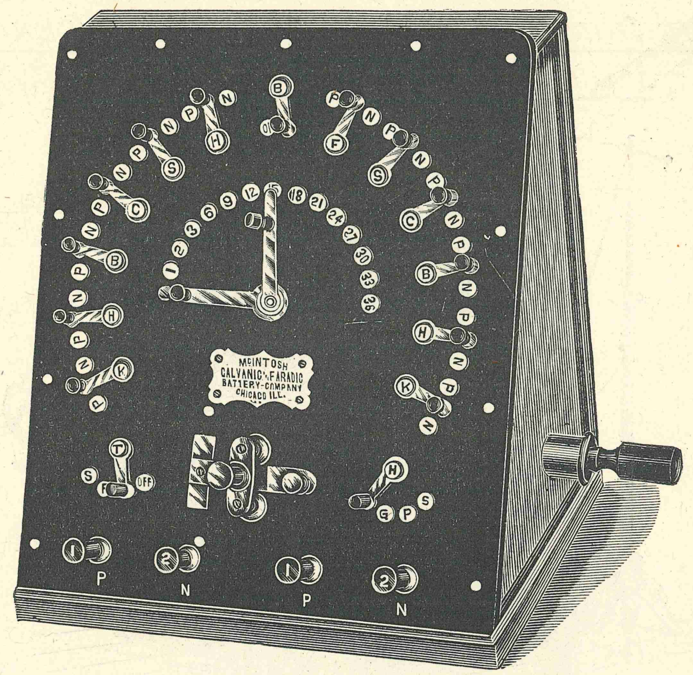
GENITO-URINARY ELECTRODE CASE.

Price $7 00

This case contains metallic sound, flexible and inflexible urethral electrodes, and one dozen olives, numbered from 10 to 32, French scale, all contained in a velvet-lined Morocco case 12 inches long, 3¼ inches wide.

See page 392.

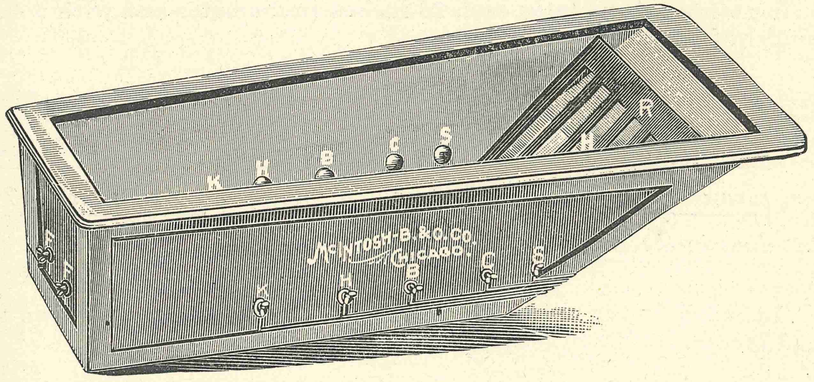
McINTOSH BATH APPARATUS.



COMBINED GALVANIC AND FARADIC BATH APPARATUS NO. 2.

This apparatus is made on the same plan as our No. 1, but less expensive. It is arranged to connect with any number of galvanic cells from 1 to 60, and has the same bath tub and electrodes as No. 1.

Price, complete as above, including 36 Galvanic Cells and 1 Paitz Battery Cell and Wood Bath Tub	$175 00
Without Cells or Tub	125 00

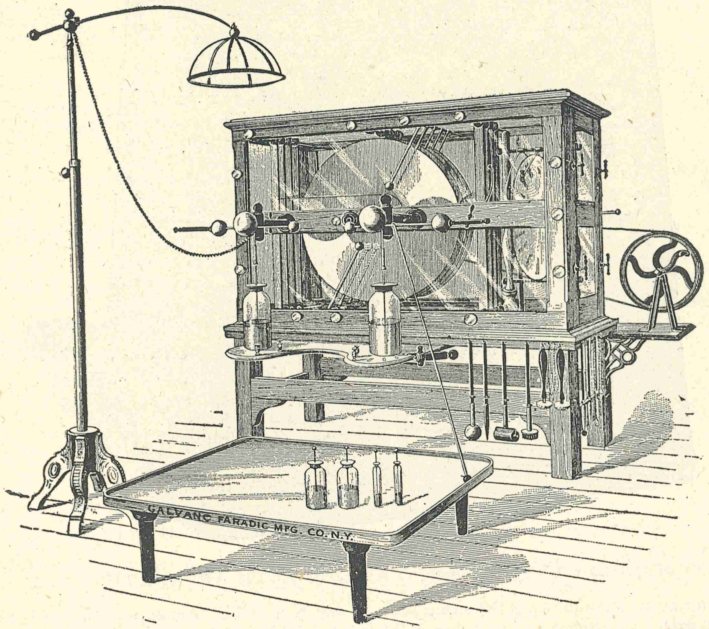


ELECTRIC BATH TUB (WOOD) WITH STATIONARY ELECTRODES.

See page 392.

GALVANO FARADIC MANUFACTURING COMPANY'S ELECTRO MEDICAL APPARATUS.

THE MORTON WIMSHURST-HOLTZ INFLUENCE MACHINE FOR THERAPEUTICAL USE.


GALVANO FARADIC MFG. CO. N.Y.

This Machine embodies every modern advance and answers every purpose in Medicine to which Influence Machines can be put. It is fundamentally of the Wimshurst-Holtz type and is made in two sizes, one having 8 revolving plates each 30 inches in diameter, the other having 6 revolving plates each 28 inches in diameter and with a like number of stationary plates.

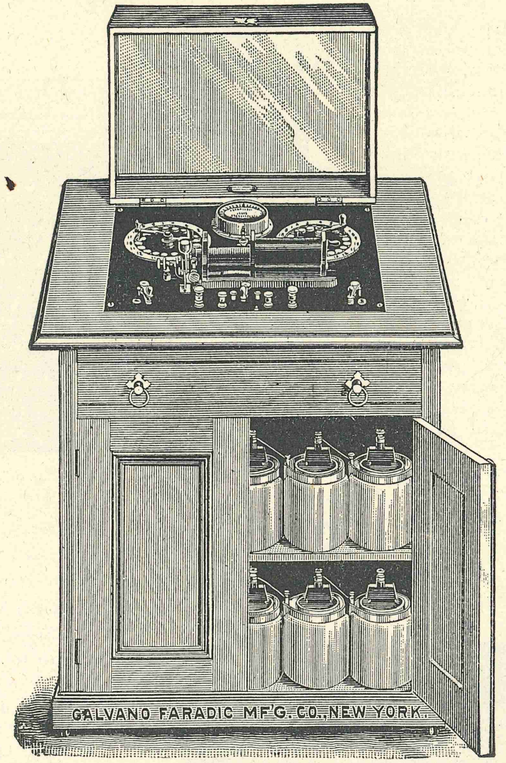
Wimshurst Charger Contained in Same Case, Mounted on Dust-Proof Ball-Bearings. Gives the Morton Static Induced and Transformer Currents. A Machine that Works at All Times. The Best in the World.

Included in the outfit is a set of electrodes, stand and crown for head breeze, insulated platform and connecting-rod.

Price of 8-plate Machine	Net $400 00
Price of 6-plate Machine	Net 350 00

GALVANO FARADIC MANUFACTURING COMPANY'S ELECTRO MEDICAL APPARATUS.

THE PERFECTION OFFICE CABINET BATTERY.


GALVANO FARADIC MF'G. CO., NEW YORK.

THIS Battery is square in form, 37 inches high, 27 inches wide and 23 inches deep. The current is supplied from 40 cells of the Fitch "Perfect" Battery, which are arranged on two shelves, and doors are provided to make them easy of access.

The Switch Board contains the galvanic circles with double cell selectors, Milliammeter. DuBois-Raymond Faradic Coil, Pole Changer and other necessary switches. Heavy insulated copper wires connect the cells with the buttons within the circles, each button corresponding to a cell.

The double cell selectors have broad flange bottoms and these slide from one button to another, always resting on one before leaving the other, so that a *gradual increase of the current is insured without the possibility of a shock.* This method of controlling the current obviates the use of a rheostat and also admits of the selection of any cell or series of cells and uniform use of the same.

The meter is direct reading and measures from 1 to 250 milliamperes. The case is made to revolve, so that the index needle may be readily adjusted to zero. The Faradic coil has a sliding secondary coil wound with 1000 yards of No. 32 copper wire, which is tapped at 500 yards, giving the effect of two coils, one of 500 yards and one of 1000 yards in length.

It is fitted with a rheotome, giving rapid interruptions, and a slow vibrator by means of which the interruptions may be graduated.

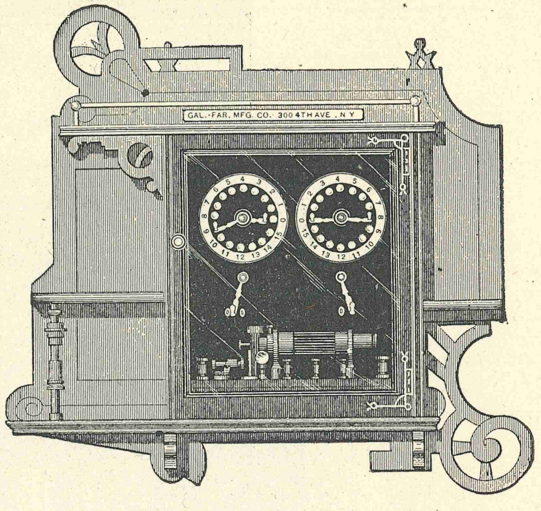
The Cabinet is made of polished oak, has a large drawer and a glass cover, is mounted on wheels and furnished with a pair of sponge-covered electrodes, handles and conducting cables

Price..Net $100 00

The Fitch "Perfect" Battery is the best cell for office use. See page 429.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

WALL CABINET BATTERY.


GAL.-FAR. MFG. CO. 300 4TH AVE. N.Y.

Height, 23 inches; width, 28 inches; depth, 8 inches.

This is a complete and compact office battery, and an ornamental piece of furniture. It may be arranged for any number of cells.

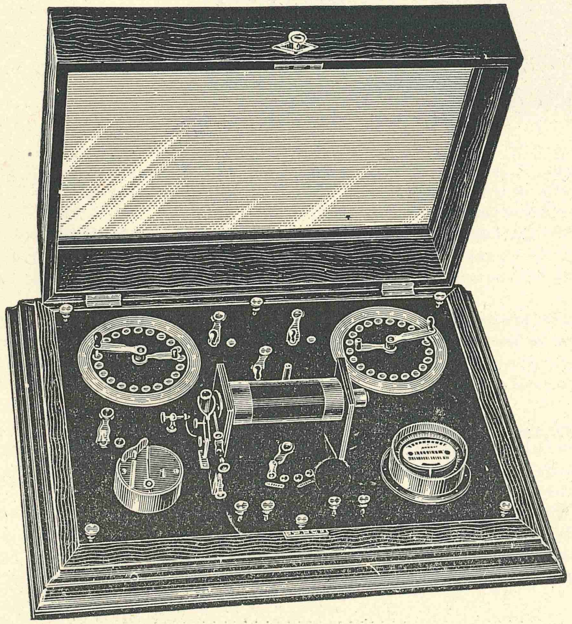
The galvanic circles with double current selectors, by means of which any cell or series of cells may be used, pole changer and Faradic switch are mounted on a vertical base of polished hard rubber 12x14 inches.

The Faradic coil is placed on a horizontal base; it has primary and secondary coils, rapid vibrator and slow interrupter, and gives three variations of the current. This is furnished in a polished cherry or oak case, with beveled plate-glass door.

Price, without cells........$50 00

OFFICE TABLE PLATE, "STYLE A."

(IN CASE.)



This is a very complete and convenient form of battery for office use. The accessories consist of double current selectors, pole changer, a DuBois-Raymond Faradic coil, with two interchangeable secondary coils, and having rapid and slow vibrators; Faradic switch, milliammeter measuring to 250 milliamperes, and an automatic rheotome giving graduated interruptions. All parts are nickel plated and mounted on a polished hard rubber base 15x20 inches. The case is of polished oak, and has a beveled plate-glass cover.

We furnish this complete, with wires attached and marked ready to connect with cells.

Price, without cells....$100 00

Specify the Fitch "Perfect" Battery when Ordering an Office Outfit.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

DESCRIPTION OF GALVANIC BATTERIES.

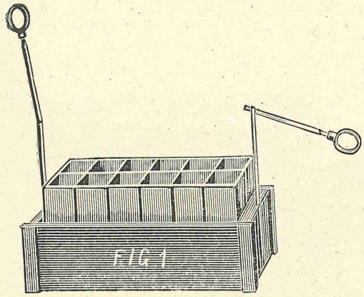


FIG 1

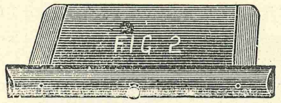


FIG 2

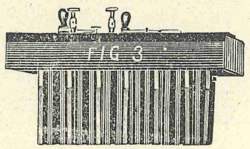


FIG 3

In the bottom of the box is a movable tray in which the cells are placed. (See Fig. 1.) This tray is controlled by two hinged rods which are fastened to it, and these by two lifting rings at the ends of the rubber table.

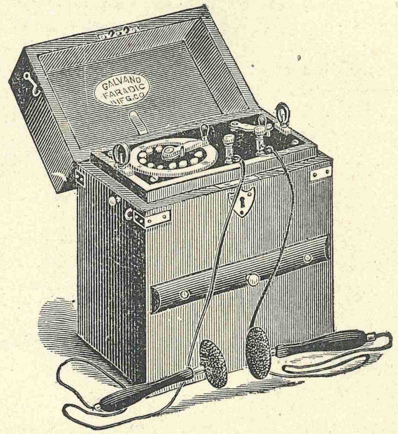
These rings, being screwed tightly down, hold the cells firmly against the hydrostat, (See Fig. 2), or being loosened, allow the hydrostat to be removed from the front of the center of the box; they also serve as handles to lift the tray of cells.

The zinc and carbon plates are arranged in couples, and fastened to a base under the rubber table. (See Fig. 3.) Wires connect the elements with the button within the circles on the rubber table, each button corresponding to a cell. These wire connections being incased, the fumes from the fluid cannot reach them: consequently no corrosion can take place, and the battery is always ready for use. To use the battery, draw out the hydrostat and raise the tray of cells, thus immersing the elements in the fluid. To bring any required number of cells into the circuit, turn the current selectors to the figures marked on the circles. Before the selector leaves one button it rests on the next, thus insuring a gradual increase of the current without the possibility of a shock. All of our galvanic batteries are provided with a commutator or polarity changer. The hydrostat is perfect, and these batteries can be carried about without danger of spilling the fluid.

PRICE LIST OF GALVANIC BATTERIES.

12 cells	$30 00
16 cells	35 00
24 cells	50 00
32 cells	60 00
36 cells	70 00

GALVANIC BATTERIES WITH RHEOTOME ATTACHMENT.


GALVANO FARADIC MFG. CO.

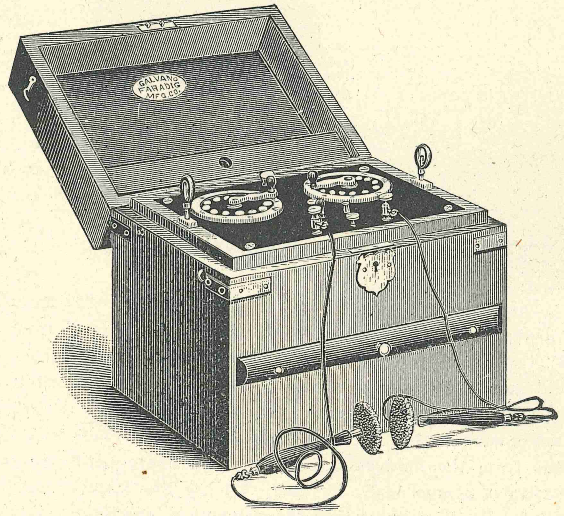
These batteries are provided with our new automatic rheotome. This accessory is for the purpose of interrupting the galvanic current, and may be used to advantage when it is desired to obtain a powerful muscular stimulation.

24-cell galvanic battery, with rheotome	$60 00
32-cell " " " "	70 00
36-cell " " " "	80 00

See page 393.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

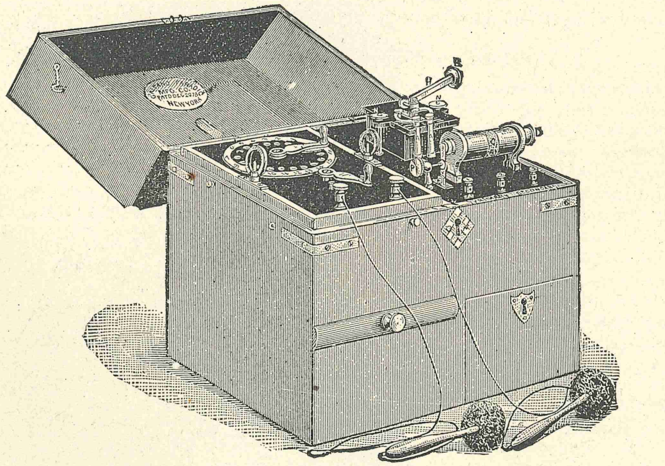
24-CELL GALVANIC BATTERY.


GALVANO FARADIC MFG. CO.

This is adapted for all purposes where a strong current is required.

Price...$50 00

COMBINED GALVANIC AND FARADIC BATTERIES.



Our instruments are made no larger by the combination. The combination of a galvanic battery with a Faradic machine *(or, rather, their being contained in the same case)*, enables the physician to use either form of the current at will, and in this respect they are desirable especially *for office practice* or *for the specialist.*

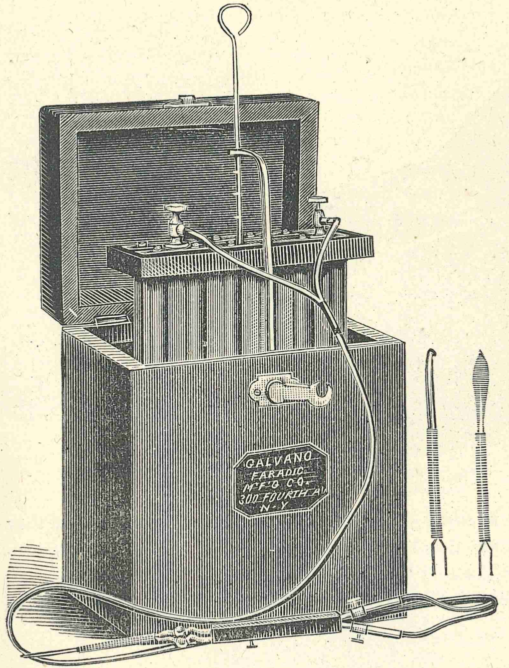
16-cell combined Galvanic and Faradic Battery $45 00
24-cell " " " " 60 00

See page 393.

Send for Galvano Faradic Manufacturing Company's Complete Catalogue.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

"G. F." CAUTERY OUTFIT.


GALVANO FARADIC M'F'G CO. 300 FOURTH AV N.Y.

This Battery is intended for eye, ear, nose, throat and other minor cautery work. It is small and compact, can be carried about with the fluid in the cell without danger of spilling, and will fully meet the requirements of the specialist. The cut shows the elements (one large zinc and twelve carbons) suspended over the jar containing the fluid, the other jar serving as a drip-cup for the elements when not in use. The heat may be regulated by immersion.

We furnish with this Battery:
One Universal Handle with Current Breaker.
One pair Conducting Cords.
Three Platinum Instruments.

Price, complete.............$26 00
Battery only................ 18 00

THE "G. F." CAUTERY BATTERY.

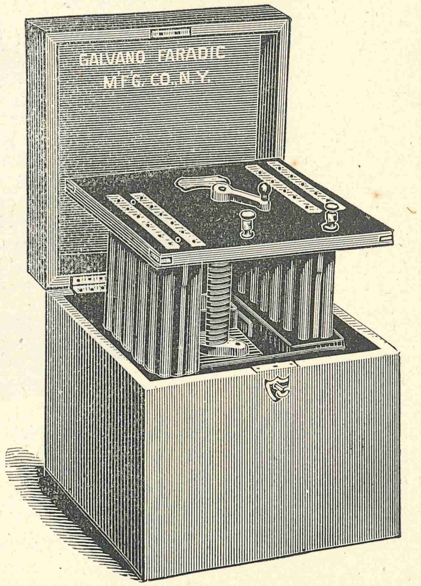
(DOUBLE ELEMENT.)

This Battery is intended expressly for office use, and will give a current of sufficient power to heat ordinary-sized electrodes or a loop. It will also light a 4-volt incandescent lamp. The heat is regulated by immersion, the elements being arranged to raise and lower by means of a coarse-threaded screw. When necessary to close the cover, the base holding the elements is given a quarter turn and lowered into the drip-cells.

Furnished in a black walnut case with heavy conducting cables.

Price..................................$30 00

See page 393.

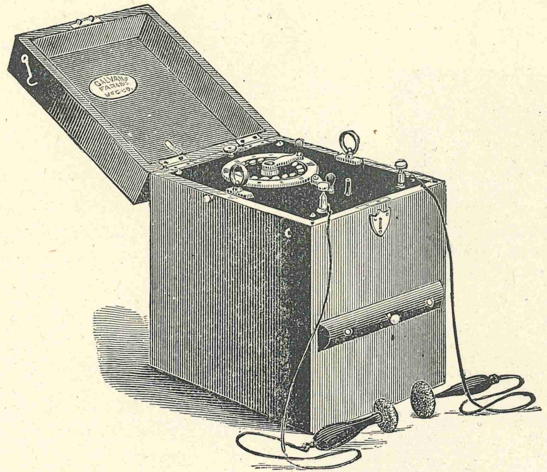

GALVANO FARADIC MFG. CO. N.Y.

Send for Galvano Faradic Manufacturing Company's Complete Catalogue.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

GALVANIC BATTERIES.

(IN PLAIN CASES.)



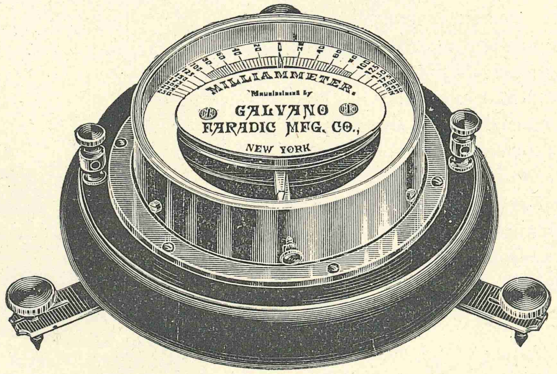
These batteries are constructed on the same principle as our other batteries. While they are not equal in finish, they are well made, durable and reliable, and will meet the requirements of the physician who wants a good battery at a low price.

Furnished in black walnut cases with handles, cords and sponge covered-metallic discs.

See page 393.

Price, 10-cell battery	$20 00
Price, 20 " "	30 00
Price, 30 " "	40 00

HORIZONTAL MILLIAMMETER.



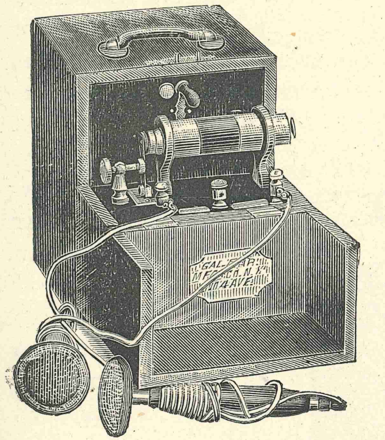
This is a desirable form of meter, measuring from one to two hundred and fifty milliamperes. It is provided with leveling screws, and the case is made to revolve so that the needle may be easily and quickly adjusted to zero.

Price, horizontal milliammeter	$20 00
Price, vertical milliammeter, measuring from 1 to 500	25 00

See page 392.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.

CLOSED CELL FARADIC BATTERY.



This is a very convenient form of battery for a physician or family use. It has the rapid vibrator, gives three variations of the faradic current, and is sufficiently strong for ordinary treatment.

The cell contains a solution of sal ammoniac and water, and is sealed so that the battery can be carried about without danger of leakage.

To start the battery into action, it is only necessary to change the switch from one button to another.

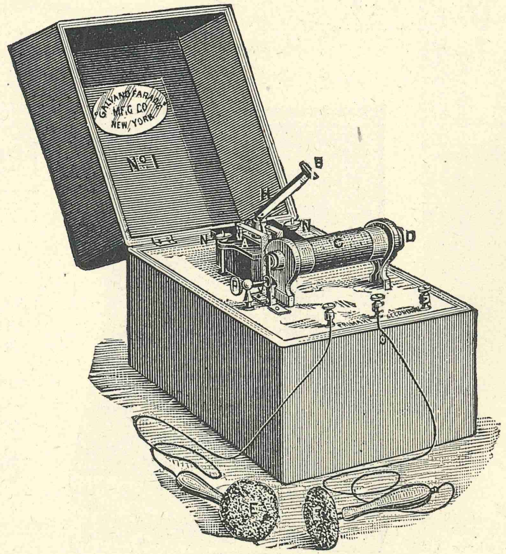
The battery will run for months without attention. The renewal of the solution and zinc is inexpensive.

Furnished in a polished oak case, with handles, cords and sponge-covered metallic discs.

Price	$12 00

See page 393.

ELECTRO MAGNETIC MACHINES.

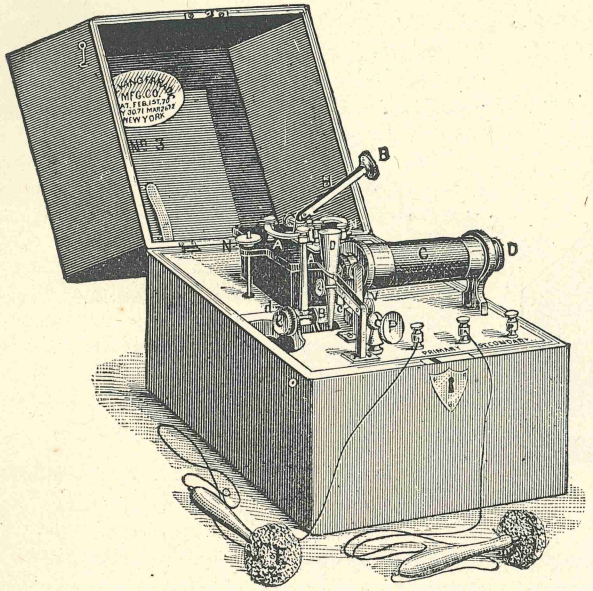

GALVANO FARADIC MFG. CO. NEW YORK
No 1

Price, No. 1	$10 00
Price, No. 2	15 00

The No. 1 and 2 machines are especially adapted for family use, although frequently used by physicians as a visiting battery. They have the rapid vibrator by which the current is modified so as to seem almost continuous, and can be administered without pain. They have both primary and secondary coils, and give three variations of the current. Furnished in polished oak or black walnut cases, with handles, cords and sponge electrodes.

See page 393.

GALVANO FARADIC MANUFACTURING COMPANY'S BATTERIES.



No. 3.

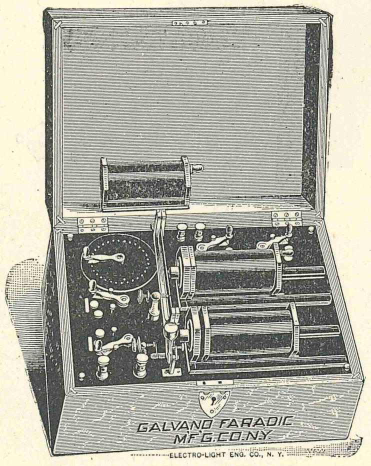
The No. 3 Machine is more desirable for a physician. It has a large coil, gives three variations of the current and has both rapid and slow vibrators, the latter being valuable in producing muscular contractions. This can be regulated so as to give slow and distinct shocks as well as quick vibrations, at the will of the operator.

Price $20 00

See page 393.

The Goelet Faradic Battery.

MOST
RAPID
OF
RAPID
VIBRATORS.
SLOWEST
OF
SLOW
VIBRATORS.



SEVEN COILS.

1500 yds. 1000 yds. 500 yds.	Fine
800 yds. 500 yds. 300 yds.	Medium
250 yds.	Coarse

In Length.

Generally recognized as the best and now being rapidly adopted by all Leading Gynecologists

This new form of Faradic Battery is constructed with secondary coils of varying lengths and sizes of wire, as suggested by Dr. A. H. Goelet, and is fitted with our new "Singing Rheotome" vibrator, giving the maximum number of vibrations attainable and producing the most sedative effect.

Price..Net $50 00

GALVANO FARADIC MANUFACTURING COMPANY'S ELECTRIC APPLIANCES.

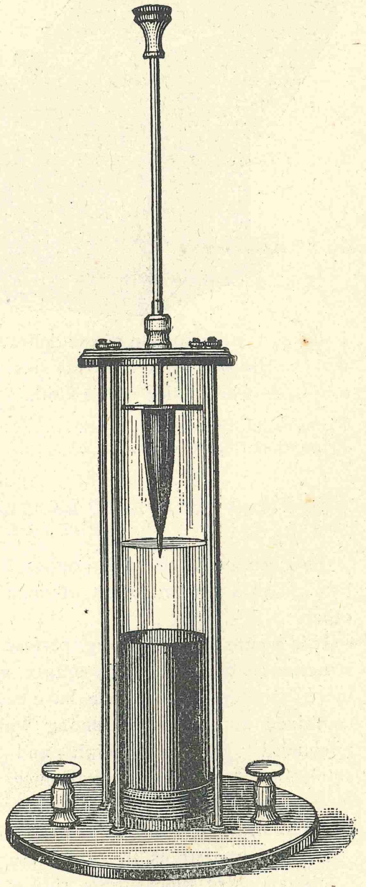
CRIADO RHEOSTAT.

(UPRIGHT.

This instrument is the only perfect current controller yet devised. It will work equally well in circuit with the Edison incandescent current or with any number of cells connected in series. The construction of this instrument is very simple. A cup of pure carbon fastened in the bottom forms one of the terminals, the other terminal being a tapering carbon rod fastened to a metal rod, and which may be gradually raised and lowered by means of a coarse-threaded screw. There are no wires to get loose, and all danger of shock is avoided. The glass should be filled with water until it touches the small sponge on the end of the carbon rod when raised to the top.

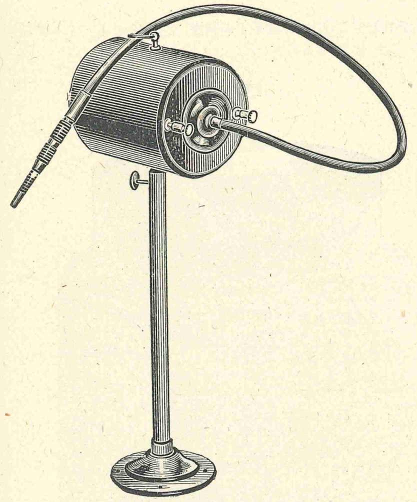
Price $10 00

See page 392.



THE "G. F." COMPANY'S MOTOR.

(FOUR VOLTS.)



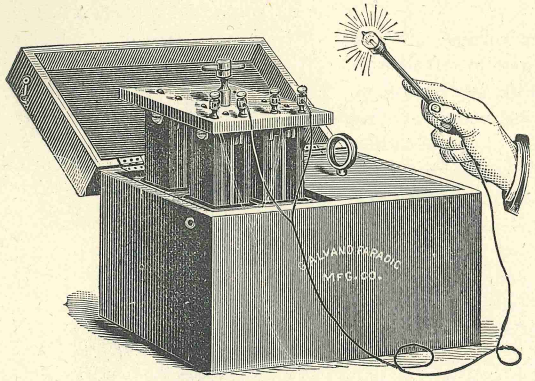
This is the most desirable form of motor for surgeons' and dentists' use. It has no dead point and will start from any position. The parts are encased in a dust-proof cylinder, and oil holes are provided to admit of oiling without taking the motor apart. The motor is usually placed on a stand and is made to revolve with the least effort. It can, however, be suspended from an arm or bracket if desired. This can be operated with any 2-cell storage battery.

Price of Motor, nickel-plated	$25 00
Price of Stand, nickel-plated	5 00
Price of Flexible Shaft and Hand Piece	15 00
Price of Connecting Cords and Floor Push	5 00

See page 393.

GALVANO FARADIC MANUFACTURING COMPANY'S ELECTRIC APPLIANCES.

THE ELECTRIC LIGHT BATTERY.



This battery is designed expressly for lighting the miniature incandescent lamps, and may also be used where a mild galvanic current is required.

It is particularly adapted for use with the Leiter Cystoscope.

The elements are zinc and carbon.

To use the battery, the cords are fastened to the binding posts, which are numbered to correspond with the cells, and by means of a lever screw, the elements are gradually lowered into the fluid, thus avoiding the destruction of the delicate lamps. When the battery is not in use, the elements may be changed to the opposite side, and the hydrostat cover placed ver the cells to prevent evaporation or spilling of the fluid.

Price, 4-cell battery	$13 00
Price, 6-cell battery	16 00

See page 393.

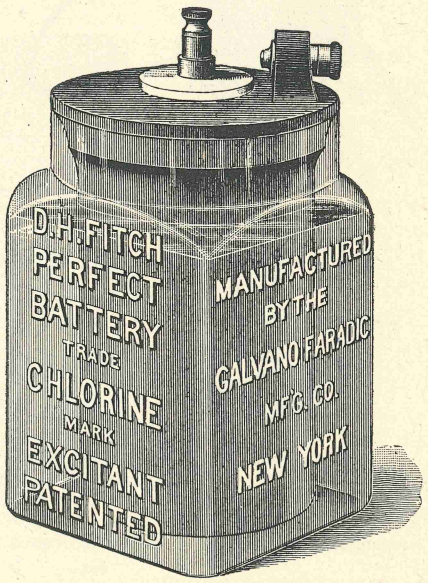
THE FITCH "PERFECT" BATTERY AND "PERFECT BATTERY EXCITANT—THE BEST OPEN CIRCUIT IN EXISTENCE.

This battery, as its name implies, has been brought to a perfection not attained by any other.

It is a pure carbon battery, perfect in construction, handsome in appearance, and has more desirable qualities than have ever been combined in any other, among which are unequaled cleanliness, high and steady efficiency, low internal resistance, quick recuperation and long duration without care or renewal.

It has few parts, is free from the various combinations of blocks, rods, rubber bands, etc., hence, simple, easily understood and readily set up.

With our Perfect Battery Excitant, there is a powerful, soluble, depolarizing ingredient in the solution which is replaced whenever the solution is renewed, and without the expense of replacing exhausted negatives, hence, all the advantages of both an efficient depolarizing agent and a permanent or non-perishable negative.



Size, 4 inches square by 7 inches high.

Price, "Perfect" Battery, complete, net	$0 75
Price, "Perfect Battery Excitant," per package, net	12
Price, extra zinc rods, net	08
Price, glass jar	20

Chloride of Silver Dry Cell

MEDICAL BATTERIES.

. . . . MANUFACTURED BY . . . . .

The Chloride of Silver Dry Cell Battery Co.

BALTIMORE, MD

THE DISTINGUISHING FEATURES:

THE distinguishing features of the now well-known Chloride of Silver Dry Batteries, containing interchangeable Cells, whereby they differ from all others, obsolete as well as yet existent forms, is not only the particular way and manner the Silver Chloride itself is applied to Electrical work—insuring compactness, efficiency, constancy and durability— but also the fact that the cells themselves, *dry and free from fluid*, and absolutely without the faintest local action while not in use, once they are finished, become *immediately ready for long-continued use* without further attention of any sort soever, until their elements shall have been completely reduced and exhausted.

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY CELL BATTERIES, CONTAINING INTERCHANGEABLE CELLS.

THE ADVANTAGES WE CLAIM FOR THEM ARE:

1.—COMPACTNESS AND PORTABILITY.

Fig. A, on page 434, shows the Chloride of Silver Dry Interchangeable Cell as it appears when ready to be attached to a cell supporting plate. Cut is exact size, and it may therefore be readily seen that fifty of them will occupy but a very small space. The weight of each cell is two ounces, consequently fifty of them, with mahogany battery case, electrodes, cords, handles and rheostat, are perfectly portable and can be *carried by a child with comfort and ease.* The cells being hermetically sealed, there can be no leakage, and should one of these batteries be tipped over—an accident liable to happen to every instrument of the kind—it can remain in a reversed position for an indefinite period of time without being injured in the slightest.

2.—EASE OF RENEWAL.

This is an entirely new feature of these incomparable batteries. Where formerly it was necessary for every battery to be returned to us when the cells required renewal, by the adoption of our new Interchangeable Dry Cells, with which all Galvanic medical batteries are now provided, any one can rapidly fit out a fifty-cell battery with an entire new set of cells, or remove any one cell in the series and replace it with a fresh one in a few minutes. All Surgical Instrument and Electrical Supply Houses will carry a stock of fresh cells on hand, *and one at a distance can therefore have his battery renewed as easily and quickly as at our factory in Baltimore.*

3.—CLEANLINESS.

This point necessarily follows from the absence of all liquid and the hermetical sealing of the cells—caustic and corrosive liquids being out of the way—the batteries *must remain clean at all times.*

4.—CONVENIENCE AND RAPIDITY OF ACTION.

No battery can be as *conveniently and quickly operated* as these. With them it is only necessary to open the box and connect the electrodes, when the current instantly develops upon final closure of circuit. Reverse the process—open the circuit, disconnect the electrodes—and the current, together with waste of elements, *at once ceases.*

5.—CONSTANT AND UNIFORM CURRENT.

Steady work does not *weaken* the strength of current, nor cause it to *fall in the slightest.* After two or more years of regular use, due trial and strict examination will show that the Chloride of Silver Dry Interchangeable Cells produce the same even, steady flow of electricity as when just finished. No other practicable form of medical battery has ever equalled this—a few minutes' to an hour's work is quite sufficient to exhaust the power of any of them.

6.—EXTREME DURABILITY.

This follows, as a matter of course, from what has been said above. The simplicity of the apparatus and absence of parts liable to wear, loss or breakage, as well as of fluid to evaporate, corrode or destroy metal or connections; preservation of the elements and prevention of all waste whilst the battery is not in use; superiority in respect of lasting quality, is beyond question. No repairs are ever necessary, and the life of a Constant Current Chloride of Silver Interchangeable Cell Battery is *only limited by the amount of actual work done.* This work, after two or more years, finally reduces the elements, when the exhausted cells can, at a nominal cost, be exchanged for new cells, and the battery at once becomes precisely as good and powerful as ever.

7.—ABSENCE OF ALL LOCAL ACTION WHEN CELLS ARE NOT IN USE.

All chemical action cease in our Chloride of Silver Dry Cells the moment connection between the terminals is broken. They can therefore remain unused for any number of years without deteriorating in the slightest—on the contrary, age improves them. This cannot be said of any other form of battery cell on the market, but it is a point which appeals to every intelligent purchaser. Some manufacturers claim to make a form of closed cell which has "*practically*" no local action when not in use. But we, as before stated, guarantee that there is POSITIVELY NO WASTE of the elements in our cells excepting when battery is at work. Every physician as well as dealer will readily see that if there is the *faintest* local action going on in the cell while on the Instrument Maker's shelf waiting to be sold, or in the physicians' office while at rest there, *such a cell should neither be sold nor purchased.* Assuming that an Instrument Maker has such a battery on the shelf for a year, and the purchaser has it in his office for the same period of time, and that during this year he may have occasion to use the instrument but four or five times; nevertheless, it would be exhausted, and would have to be returned to the maker for restoration. To buy or sell such batteries is a long step backwards. *Our cells improve with age* and, when completely exhausted, need not be returned to the maker for renewal, for any one can purchase new cells and insert them in the places of the reduced ones.

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY BATTERIES, CONTAINING INTERCHANGEABLE CELLS.

CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

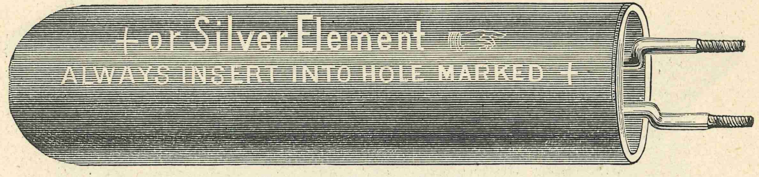


FIG. A.—(Patent Pending.)

In comparing the first cells made by this Company with those we now construct, a vast difference will at once be apparent, even to the inexperienced eye—all, however, in the nature of improvement. After having perfected the sealing of the cells, and the preparation of the Electrolyte, we next turned our attention to devising some method by which exhausted cells could be readily disconnected from our batteries and new cells attached in their places, thus obviating the necessity of returning our make of batteries to the factory when the cells require renewal. Of course, the method of arranging the cells in series which we employed at the time was not difficult for those accustomed to repairing batteries to comprehend, but we felt that a very simple arrangement, so plain that anyone could understand would better meet the requirements, for it would enable even those totally unskilled in Electrical or mechanical matters, to do the work of changing the cells themselves, as well as to remedy any defect in the connections which might occur through accident. We have succeeded in solving the problem in a very happy manner, and all of the Galvanic batteries listed and described in the following pages contain Chloride of Silver Dry Interchangeable Cells, and each instrument is accompanied by such *plain* and *explicit* directions for removing cells and attaching others in their places that the merest tyro in Electrical matters will experience no difficulty in renewing any one cell, or the whole number of cells composing the battery, when such a course becomes advisable.

Every one of these Interchangeable Cells is and will be made by an exact gauge, so that each one will be precisely like the others and a fresh cell will always fit exactly in the place from which an exhausted cell has been removed. Age does not cause these cells to deteriorate in the slightest—on the contrary, it improves them, and we always endeavor to keep them on hand for at least six months before sending them out. Under such circumstances, and with a desire to accommodate their customers, every *live* Surgical Instrument and Electrical Supply House in the country will carry a stock of our make of cells at all times, and no difficulty will ever be experienced in exchanging exhausted cells for fresh ones. Physicians not in direct communication with an Instrument dealer can depend upon receiving prompt attention at our hands, all renewal orders being filled *immediately* upon their arrival.

Fig. A shows a Chloride of Silver Dry Interchangeable Cell as it appears before being introduced into a battery.

List of Electrodes suitable for these Batteries furnished on application.

See page 430.

CHLORIDE OF SILVER DRY CELL BATTERIES,

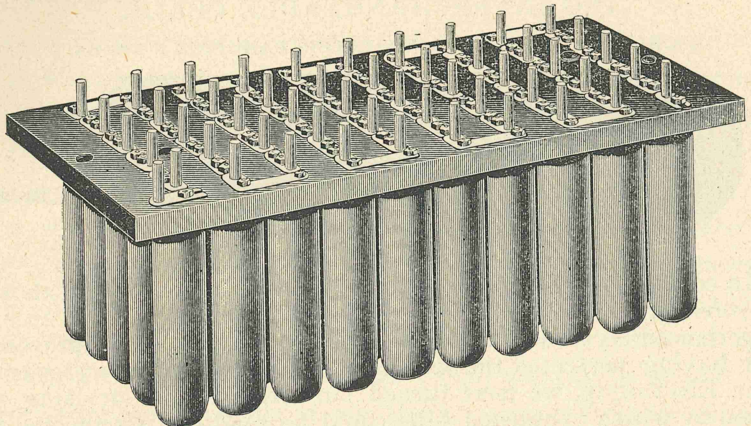


Fig. B.—Showing a set of Interchangeable cells attached to cell-plate all ready to be dropped into Battery Box.

GENERAL DESCRIPTION OF GALVANIC BATTERY NO. 1, CONTAINING CHLORIDE OF SILVER INTERCHANGEABLE CELLS.

Each instrument consists of a number of Chloride of Silver Dry Interchangeable Cells, hermetically sealed, arranged in series and attached to a plate of insulating material, as shown in Figure B.

When the elements are exhausted, they can readily be removed from the plate and exchanged for new cells at any Surgical Instrument or Electrical Supply House in the country. Full and explicit directions and the necessary tools for attaching and detaching cells accompany each battery. The connections are so simply arranged that it requires no previous electrical experience to do the work quickly and as well as we can do it ourselves.

These insulated plates, with cells attached, are now placed in handsomely finished and polished mahogany battery boxes, from which they can be readily removed at any time by lifting studs with which they are provided; and are finally covered by hard rubber plates through which the connecting pins alone project. Each of these top plates is regularly numbered from 0 to the total number of cells the battery contains. On page 435 will be found a cut of complete battery as just described; box open ready for work.

Galvanic Batteries of 24 or more cells have, in addition to the preceding parts, the following accessories:

1. A Current Reverser—Shown in cut No. 1. page 435, and also in Figure C. This is a hard rubber plate, secured within the box top by means of four oval head screws; has two metal posts with conical sockets to take the free ends of electrode conducting cords; a lever or switch for making and breaking—closing and opening—the circuit, as well as for changing the poles; and two short selecting cords for connecting it with the cells.

2. A Water Rheostat—Shown in Figure D, page 434, also in Figure C, in position on the Current Reverser. This is of hard rubber, has removable screw cap for putting in fluid, a socket below to take either of the metal posts of Current Reverser and a small socket in the top of its piston to receive electrode conducting cord.

List of Electrodes suitable for these Batteries furnished on application.

See page 430.

CONTAINING INTERCHANGEABLE CELLS.

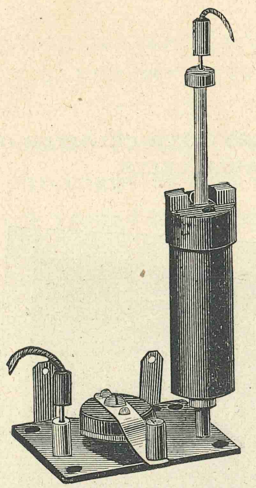


Fig. C.

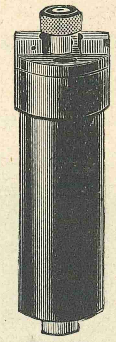


Fig. D.

A strong and durable tray is also provided, which fits within the box top, and is intended for holding the cords and electrodes. The following accessories will be found in this tray, and are included in the price of battery:

One pair silk-covered conducting cords.
One pair best quality sponge electrodes.
One plain ebonized handle.
One interrupting ebonized handle.
One wrench for use when changing cells.
One screw driver for use when removing selecting cords.
One pair nickel plated plugs for testing cells.

Each and every metal part of the apparatus just described is most carefully polished and nickel-plated, and each will be found, even in the smallest detail, made and finished in the very best manner, and second to none in respect to every quality that goes to make up a first-class instrument.

These Galvanic batteries have a capacity of over 700 hours of actual work, based on the average resistance offered by the human body in ordinary work, which is generally conceded to be 3,000 ohms or more. There is positively no waste of the elements when battery is not in use.

PRICE LIST.

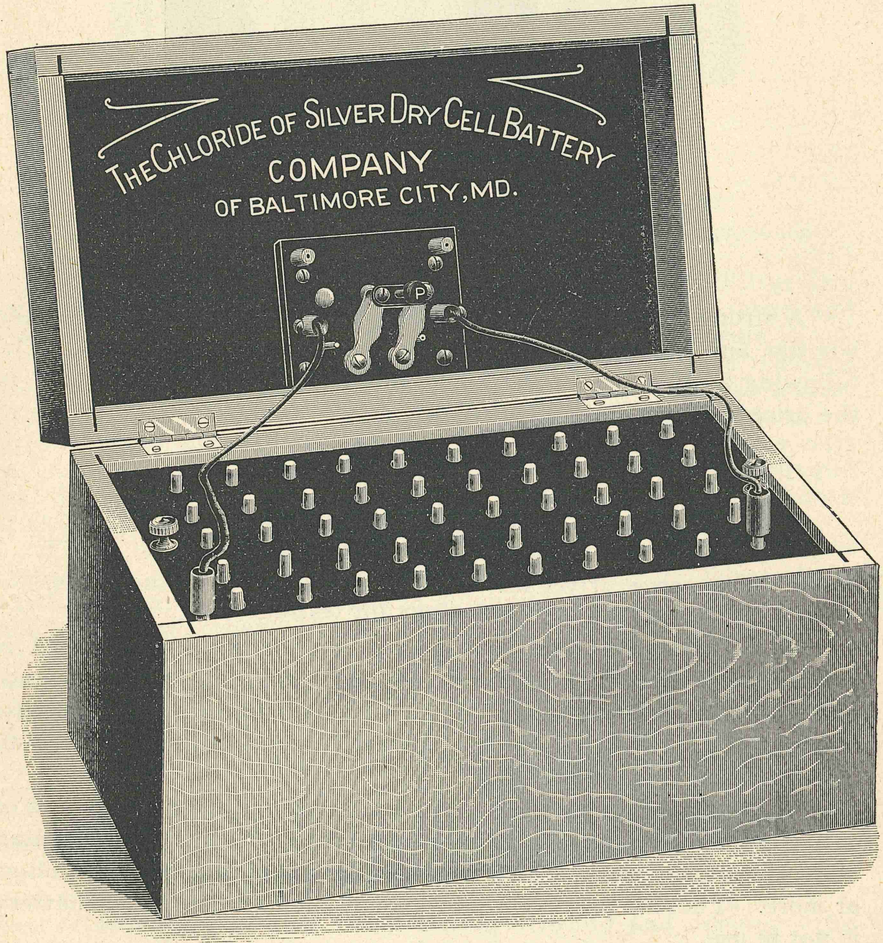
24-cell	net price	$27 00
32-cell	net price	35 00
50-cell	net price	50 00
60-cell	net price	60 00
New cells for Galvanic batteries	net price each	90
Charge for renewing and restoring	net price each	30

List of Electrodes suitable for these Batteries furnished on application.

See page 430.

CHLORIDE OF SILVER DRY CELL BATTERIES,

CONSTANT CURRENT GALVANIC BATTERY WITH CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.


THE CHLORIDE OF SILVER DRY CELL BATTERY
COMPANY
OF BALTIMORE CITY, MD.
P

No. 1.

CONTAINING INTERCHANGEABLE CELLS.

NO. 3.—CONSTANT CURRENT GALVANIC BATTERY WITH CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

This is a smaller Constant Current Battery than the No. 1, and is intended for physicians as well as family use; furnishing sufficient current for work around the head, the electrolysis of small growths, hairs, &c., &c.; in general, for the treatment of cases which do not require a large current. Put up in finely finished hard wood boxes, with conducting cords and sponge electrodes, and a wrench for changing the cells.

These batteries have a capacity of over 700 hours of actual service, based on the average resistance offered by the human body in ordinary work, which is generally conceded to be 3,000 ohms or more. There is positively no waste of the elements when battery is not in use.

PRICE LIST.

6-cell	net price	$10 00
12-cell	net price	15 00
16-cell	net price	20 00
New cells for galvanic batteries	net price, each	90
Charge for renewing and restoring galvanic cells	net price, each	30

Saratoga, N. Y., February 11th, 1892.

THE CHLORIDE OF SILVER DRY CELL BATTERY CO.,
Baltimore, Md.

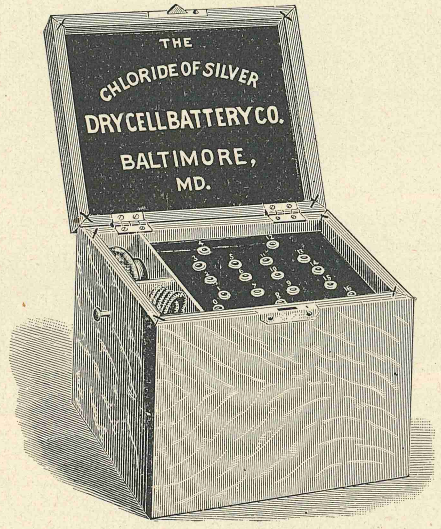
Gentlemen:—Ever since Mr. John A. Barrett put on the market his Chloride of Silver Galvanic Batteries, I have been using one of them. At first the fluid, and finally the dry cell batteries. They have, in my hands, proved all and even more than is claimed for them. They are always ready for instant use, never failing when called upon until completely used up. The same can be said of the Faradic Battery, one of which I have been using for nearly three years. Compact, light, cleanly, and giving absolutely no trouble, they are, I believe, the "ne plus ultra" of batteries for medical and electrolytic work.

Sincerely yours,

W. H. HODGMAN, M. D.

CHLORIDE OF SILVER DRY CELL BATTERIES,

CONSTANT CURRENT GALVANIC BATTERY, WITH CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.



No. 3.

List of Electrodes suitable for these Batteries furnished on application.
See page 436.

CONTAINING INTERCHANGEABLE CELLS.

NO. 10.—CONSTANT CURRENT GALVANIC BATTERY, WITH CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS AND A "WILLMS" DRY CURRENT CONTROLLER PLACED PERMANENTLY IN THE CIRCUIT.

Each instrument consists of a number of Chloride of Silver Dry Interchangeable Cells, hermetically sealed, arranged in series, and attached to a plate of insulating material. Above this is placed another plate of highly polished hard rubber, to which are attached Binding Posts for the reception of conducting cords, a Pole Changer for reversing the current, a Dry Current Controller original with ourselves (for full description of which see pages 448 and 449), and a Switch for selecting the proper number of cells to be used. In the 25-cell batteries, they are divided into 5 sets of 5 cells each; in the 35-cell batteries, into 5 sets of 7 cells each, and in the 50-cell batteries, into 5 sets of 10 cells each. This arrangement makes it possible to greatly economize the life of the cells, for it is seldom necessary to use the whole number composing a battery at one time, while in fact, when working upon very sensitive portions of the human body, such as the head for example, it will be found that, notwithstanding the presence of a *perfect* Current Controller, which is capable of very finely dividing the current strength, it is much better to use sufficient cells to produce the desired result and no more. A plain and carefully printed description of the method of attaching and detaching cells accompanies each battery, so that no one will have the slightest difficulty in renewing cells whenever this is necessary.

These instruments are all contained in handsomely finished and polished mahogany boxes, in the lower portion of which will be found a compartment for electrodes, the entrance to this being closed by a falling door at one end of the box. Upon opening this door, a black enamelled tray is exposed, which can be readily withdrawn and is of sufficient size to accommodate quite a number of electrodes. Each battery is furnished with the following, in addition to what has already been mentioned, viz: One pair silk-covered conducting cords, one pair round sponge-covered electrodes, one plain ebonite handle, one interrupting ebonite handle, one piece of soft rubber for cleaning current controller and one wrench for removing cells. Each battery box is provided with a good lock.

PARTICULAR ATTENTION is directed to the combination of our Dry Rheostat (or Current Controller) with the battery. The importance of having such an instrument for regulating the current strength is admitted by all, for by its aid the physician can apply a current in gradually increasing doses and to portions of the human body which would otherwise *not be amenable* to electric treatment. The necessity of using a Current Controller being granted, how satisfactory it is to be able to secure one which is DRY, besides being sufficiently SMALL and LIGHT to be placed permanently in the circuit of your battery. And when we add to this a battery of dry cells, what physician can *afford* to be without such a combination?

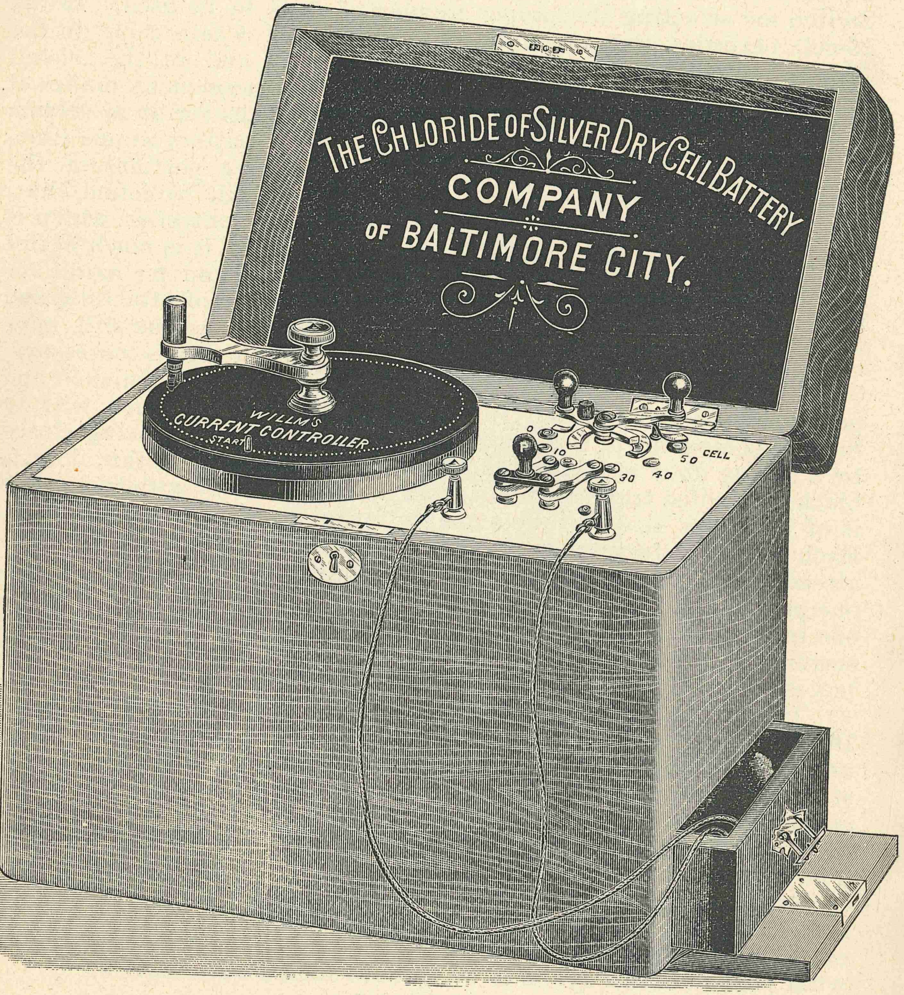
PRICE LIST.

25-cell Battery		$43 00
35-cell Battery		52 00
50-cell Battery		65 00
New Galvanic Cells	Net price, each	90
Charge for renewing and restoring Galvanic Cells	Net price, each	30

List of Electrodes suitable for these Batteries furnished on application.
See page 439.

CHLORIDE OF SILVER DRY CELL BATTERIES,

CONSTANT CURRENT GALVANIC BATTERY WITH A "WILLMS'" DRY CURRENT CONTROLLER PLACED PERMANENTLY IN THE CIRCUIT OPERATED BY CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.



No. 10.

List of Electrodes suitable for these Batteries furnished on application.

See pages 438.

CONTAINING INTERCHANGEABLE CELLS.

NO. 11.—CONSTANT CURRENT GALVANIC BATTERY, WITH ONE NO. 4 MILLIAMMETER AND A "WILLMS" DRY CURRENT CONTROLLER PLACED PERMANENTLY IN THE CIRCUIT, OPERATED BY CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

This instrument is constructed on precisely the same principle as the No. 10 preceding, but it contains, in addition, a superior 3-scale direct reading Milliammeter for measuring the current which flows from the battery. For full description of this Meter see pages 446 and 447 of catalogue.

It is of great advantage to the physician to have his Electrical Instruments in as compact a form as possible, for he is thus saved a great deal of trouble and annoyance. The difficulty has been in the past that such a combination of instruments as are contained in the above apparatus could not be obtained in a portable form, and the physician was therefore forced to carry three separate instruments when visiting his patients, viz: A Battery, Meter and Current Controller, and, when ready to begin operations, had first to make proper connections between the three, necessitating at least four circuit cords or wires, which is always more or less confusing to the operator and time-taking as well in getting ready for work. How much more *convenient* then it is to have *Battery, Meter and Current Controller all in one box*, with the connections permanent and the whole apparatus very *small and light*. In the first place, a physician has but one article to carry; secondly, he has but one connection to make, and that is with the main binding posts to the front of the case; thirdly, he has everything at the most absolute command and in the most convenient position for work.

A glance at the cut on page 441, shows the binding posts at the right, to the front of the instrument; between these is placed the Current Reversing Switch, for changing the polarity; immediately above this is the Current Controller, convenient to the right hand of the operator; to the left of this is the Cell Selecting Switch for throwing the number of cells in circuit which may be desired, and to the left of this is the Meter for measuring the current, with a small Switch for throwing Meter either in or out of the circuit. Everything is arranged in such a convenient form that, with one or two movements of the hand, one may *control the machine perfectly*, and no time is lost in getting ready for operating.

Each one of these instruments is provided with Interchangeable Chloride of Silver Dry Cells, and full directions accompany every battery, enabling one to renew the cells whenever such a course is advisable.

PRICE LIST.

25-cells	Net price	$63 00
35-cells	Net price	72 00
50-cells	Net price	85 00

(Batteries containing more than 50 cells will be made to order at short notice.)

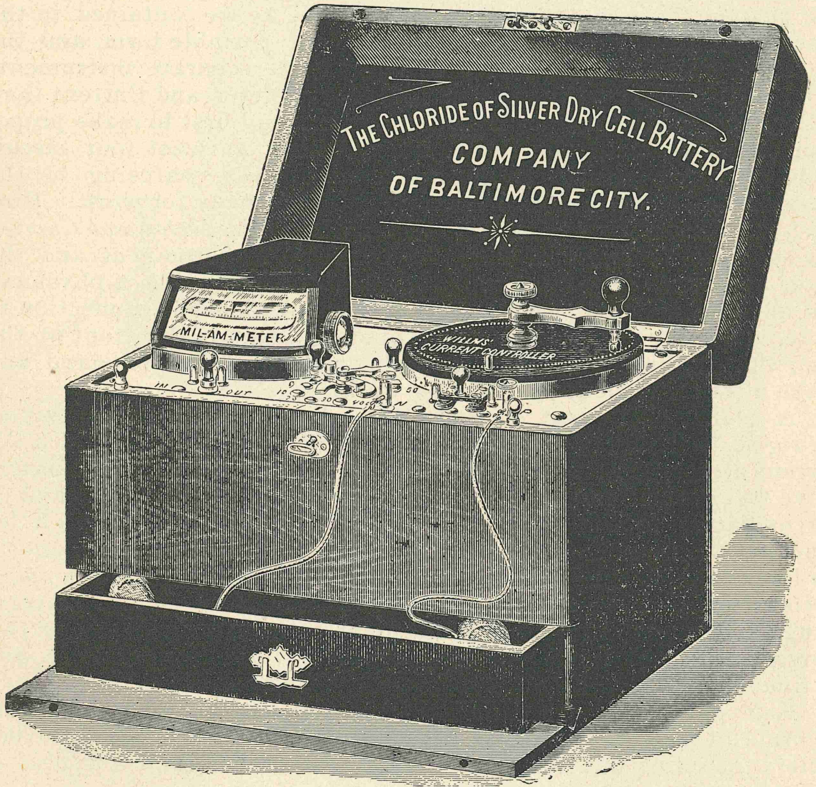
New Galvanic Interchangeable Cells	Net price, each	90
Renewing and restoring Galvanic Cells	Net price, each	30

List of Electrodes suitable for these Batteries furnished on application.

See page 441.

CHLORIDE OF SILVER DRY CELL BATTERIES.

CONSTANT CURRENT GALVANIC BATTERY, WITH OUR NO. 4 MILLIAMMETER AND A "WILLMS" DRY CURRENT CONTROLLER PLACED PERMANENTLY IN THE CIRCUIT, OPERATED BY CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.



No. 11.

List of Electrodes suitable for these Batteries furnished on application.

See page 440.

CONTAINING INTERCHANGEABLE CELLS.

NO. 2. COMBINATION BATTERY. CONTAINING CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

For some time past the demand for batteries containing both the Galvanic and Faradic currents has steadily increased, and has encouraged us to make such improvements as we feel sure will be commended by all.

The Galvanic portion of this instrument is precisely the same in every particular as the No. 1 preceding, and therefore needs no further description here.

The Faradic part contains three cell-blocks, which are arranged in the box in such a manner as to admit of either one, two or three of them being used at a time. For ordinary work – in which but a moderate degree of strength is desired—one of these cell-blocks will furnish sufficient current; if, however, it is found that one will not be powerful enough for the work in hand, the operator can place the second cell-block in circuit also, while on special occasions, when an extra heavy current is necessary, the whole three blocks may be used. The advantage of this arrangement will be at once apparent to all, for it permits a careful man to *economize* the life of the cells and, if proper care is observed, they will last *for a very long time.* The Faradic part is also provided with a Current Reverser and Current Breaker, and will yield three currents, viz: The Primary (or so-called direct) current, the Secondary (or induced) current, and a combination of the Primary and secondary currents, while the mechanical arrangements for increasing and modifying the strength of currents are *perfect.*

PRICE LIST.

24-cell	Net price	$47 00
32-cell	Net price	55 00
50-cell	Net price	70 00
New Cell for Galvanic part	Net price, each	90
Renewing and restoring Galvanic Cells	Net price, each	30
Renewing and restoring Faradic Cell-Blocks	Net price, each	75

PHILADELPHIA, PA., June 9th, 1891.

THE CHLORIDE OF SILVER DRY CELL BATTERY CO.,
Baltimore, Md.

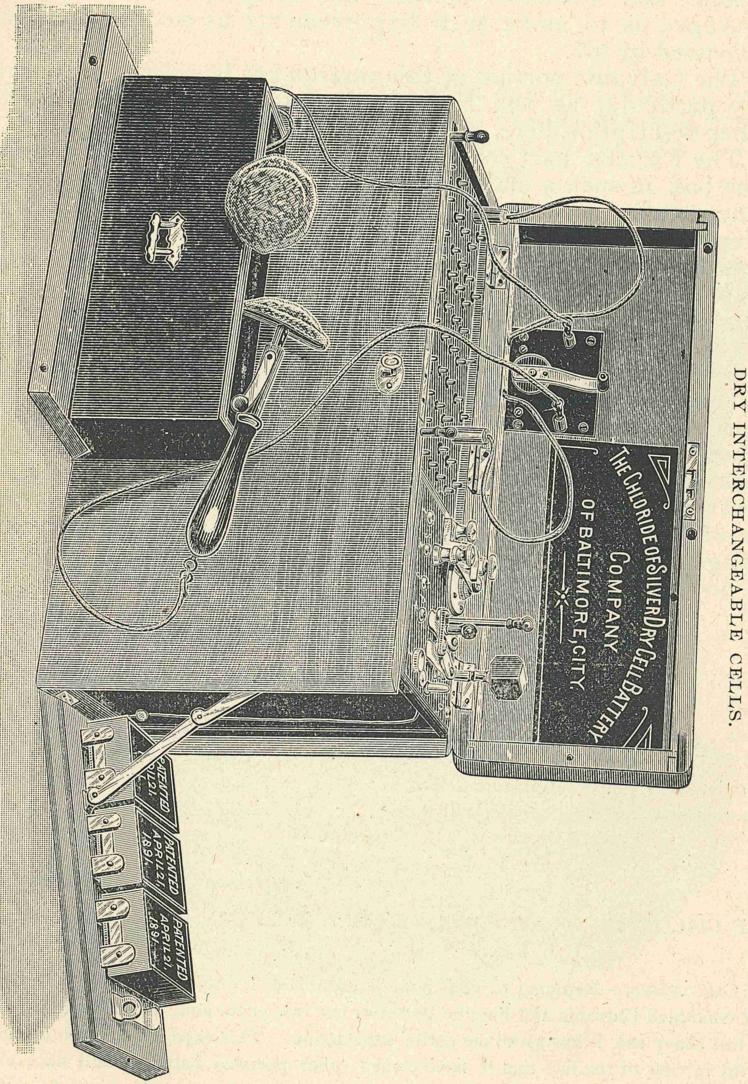
GENTLEMEN:—Replying to your note of even date, I would say that I have used one of your combined Galvanic and Faradic Batteries for two years and, notwithstanding the fact it has had heavy use, it has given me entire satisfaction. This experience is all the more noteworthy in view of the fact that I have owned other portable batteries and have abandoned them as impracticable. I do not hesitate to recommend my professional friends and my classes to purchase your Galvanic Batteries, and in no case have I thus far had occasion to regret my course. Truly yours,

CLARENCE BARTLETT, M. D.

List of Electrodes suitable for these Batteries furnished on application.

See page 443.

CHLORIDE OF SILVER DRY CELL BATTERIES,


THE CHLORIDE OF SILVER DRY CELL BATTERY COMPANY OF BALTIMORE, CITY
PATENTED APRIL 21 1891

COMBINATION GALVANIC AND FARADIC BATTERY, CONTAINING CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

No. 2.

List of Electrodes suitable for these Batteries furnished on application.

See page 442.

CONTAINING INTERCHANGEABLE CELLS.

NO. 12.—COMBINATION GALVANIC AND FARADIC BATTERY, CONTAINING CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

A glance at the cut on opposite page will enable every one to form a good idea of the completeness of this instrument in every detail, but no woodcut ever made could do justice to its beauty of finish, and the perfect workmanship displayed at all points.

We have shown in our description of the No. 11 instrument preceding, what a great convenience it is to have a meter and Dry Current controller placed permanently in the circuit with a battery of Galvanic cells, while the completeness of the No. 8 battery as a Faradic Machine will be fully discussed on page 458 of this catalogue. Every one must admit that both the Nos. 11 and 8 instruments are exponents of what is most complete and beautiful in both Galvanic and Faradic batteries, and that *nothing has ever before been constructed which will compare with either of them.* It therefore needs no argument in support of our claim that this No. 12 instrument, although perfectly portable, is as *complete* and *perfect* in every respect *as any Cabinet Battery* of other makes, while it contains many points of superiority over all such apparatus; among which may be noted the CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS, and the "WILLMS'" DRY CURRENT CONTROLLER.

It contains in both compartments all the essentials of a perfect instrument, viz: GALVANIC—Milliameter, Willms' Dry Current Controller, Cell Selector, Current Reverser. FARADIC—Willms' Dry Current Controller, Cell Selector, Current Reverser, Slow and Rapid Rheotome, one Primary and four Secondaries, and the constant, reliable and economical Chloride of Silver Dry Interchangeable Cells.

PRICE LIST.

50-cell Combination Galvanic part of battery and Faradic Battery No. 12, complete		$115 00
(This is the only size we carry in stock. Other sizes, containing fewer or more cells, on short notice.)		
New cell for Galvanic part of battery	net price, each	90
Renewing and restoring Galvanic cells	net price, each	30
Renewing and restoring largest Faradic cell-block	net price, each	1 50
Renewing and restoring small Faradic cell-block	net price, each	57

See page 445.

"THE OSBORNE,"
57th St. and 5th Ave.

NEW YORK, N. Y., June 8th, 1893.

GENTLEMEN:—The batteries furnished me by you, the latest pattern of Chloride of Silver Combination Galvanic and Faradic, No. 12 and larger size of Faradic battery with Current Controller No. 8, have both been in daily use for several months. They are always ready for use, work smoothly and cleanly, and have not given me trouble for a moment. The various attachments are effective, and the instruments are to me a pleasure and satisfaction in their working. It is gratifying to be able to write this. The large battery, No. 12, I can recommend as much the best combination that I have used or known.

Very truly yours,

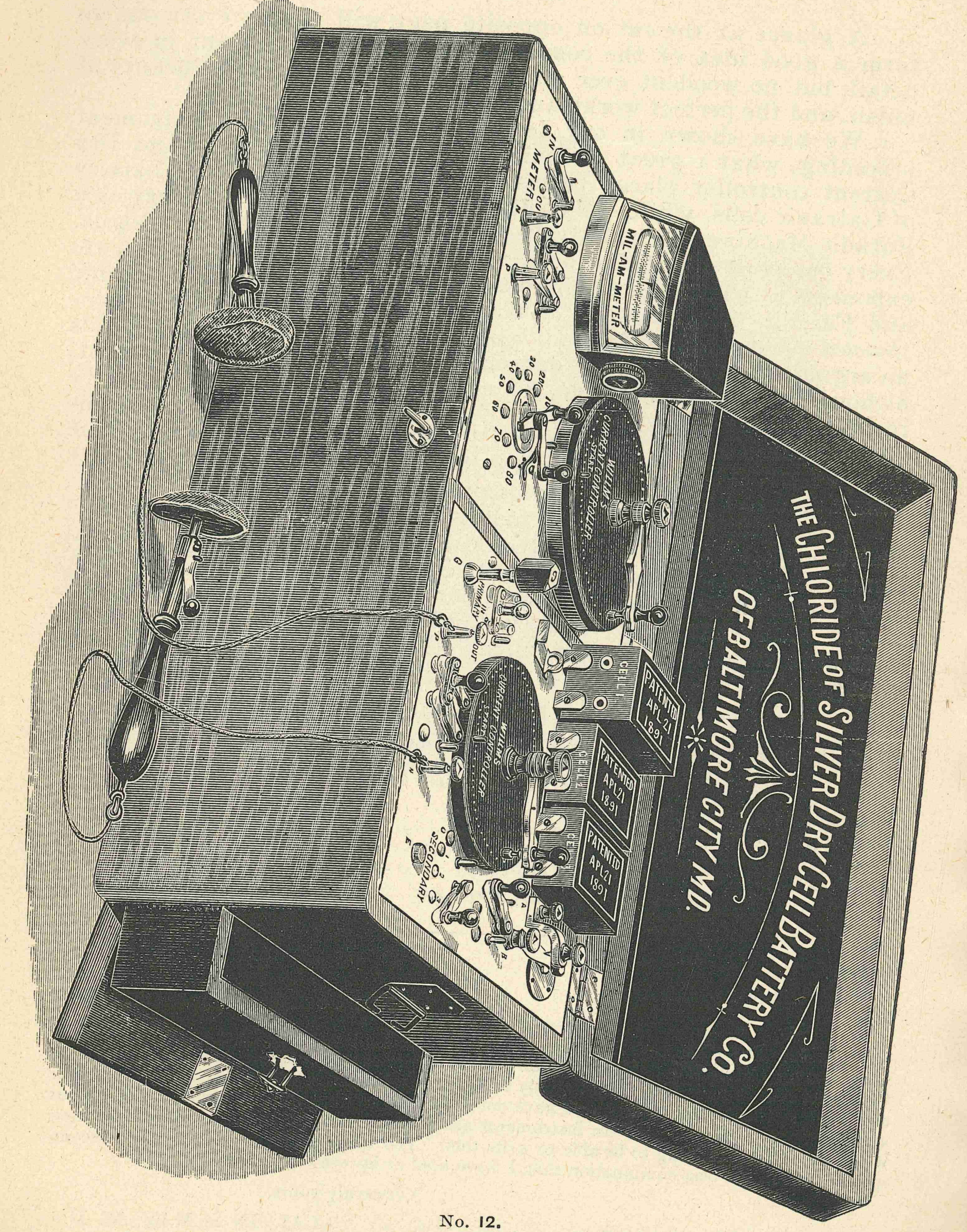
CALVIN S. MAY, M. D.

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY CELL BATTERIES.

COMBINATION GALVANIC AND FARADIC BATTERY, CONTAINING CHLORIDE OF SILVER DRY INTERCHANGEABLE CELLS.

See page 444.



No. 12.

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY BATTERIES.

NO. 4.—MIL-AM-METER.

Experience has demonstrated to us just what are the desirable features to be embodied in an instrument of this kind, as will be recognized from the following:

1. An absolute Electrical Meter should be *accurate*.
2. Such a Meter should be as free as possible from changes due to time and surroundings.
3. Friction must be entirely absent.
4. The free parts of the instrument must be provided against accidental displacement.
5. A physician's Mil-am-meter should be readable from either a sitting or standing position.
6. A perfect Meter should have a wide range of measurement.
7. A Meter for clinical use should be read off directly without the use of tables or calculations.

All of these points have been most fully met in the construction of the Meter now offered to the medical profession.

By an entirely new and wonderfully simple arrangement, we have provided for the widest possible compass, together with direct reading scales. Three independent reading scales are stamped at equal distances apart on the three faces of a celluloid roller. One of these scales is marked in 5 milamperes, divided into fifths. The second scale is divided into 25 milamperes, and the third scale reads up to 250 milamperes. This roller is placed in the face of the Meter, under the end of the pointer, on a shaft which passes through the side of the case, and terminates in a button by which the roller may be turned.

In connection with this roller is our novel device inside the case, by which, when the roller is turned so as to bring any one of the three scales to view under the pointer, the connections within the case are automatically adjusted so as to cause the Meter to read *directly* and *accurately*, according to the scale so exposed to view. By this means the physician is saved the trouble of using multipliers with his scale readings, and has at command three separate scales meeting every desirable case, and each scale reading his measurements directly.

The satisfaction which physicians have in this novel and radical improvement in Meters, together with the superiority of our Meter in every other desirable characteristic, makes this instrument worthy of exclusive use amongst the profession of this country.

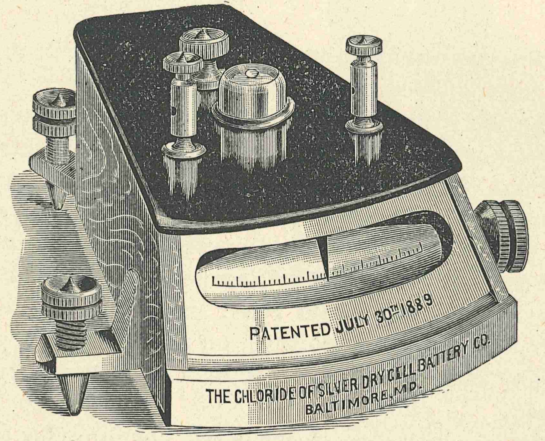
Price..$30 00

See page 447.

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY CELL BATTERIES,

MIL-AM-METER.



No. 4.

See page 446.

List of Electrodes suitable for these Batteries furnished on application.

CONTAINING INTERCHANGEABLE CELLS.

THE "WILLMS" DRY CURRENT CONTROLLER.

Every physician accustomed to the use of Electricity has long since fully realized that, in order to be able to apply the current from a Battery properly and have perfect control over it at the same time, he *must* have a Rheostat or Current Controller of some description in the circuit. Such an instrument is therefore justly considered as a necessary adjunct to every well-equipped Electrical outfit—in fact, of just as much importance as the Meter with which the dosage of current is measured.

The instruments heretofore offered for this work have been very inferior. Some improvements have been made from time to time, but the intelligent physician has for a long while felt that his wants in this direction were not yet supplied.

In the first place, a Current Controller for medical work should be *absolutely dry*, as the presence of liquid in any form is very objectionable, causing the metal parts of such an instrument to become oxydized and rendering frequent cleaning and repairing necessary, besides which, filling and emptying the Rheostat, which is necessary upon visiting each patient, is uncleanly and troublesome work, and time-taking as well, precluding its use as a portable apparatus.

Then the ideal Current Controller should be capable of controlling either a Galvanic or Faradic current so perfectly that, no matter what the maximum strength of the current may be, it will still be capable of *the most delicate adjustment.* Such an instrument we now offer the profession (see page 449 for cut), and with its assistance the physician can now use the Electric current upon portions of the human body and for classes of work that, *with his former imperfect Rheostat, he was really afraid to approach.* One can, without fear of imparting a shock, apply the current to the mucous membrane of the mouth, penis, vagina, rectum, etc., etc., while its adjustment is so delicate that the variations of current strength are unaccompanied by a flash when applied to the head. In treating sensitive and very nervous patients such an instrument is *invaluable.*

Price, mounted on base with binding posts.......................................$10 00

St. Louis, Mo., December 28th. 1891.

THE CHLORIDE OF SILVER DRY CELL BATTERY CO.,
Baltimore, Md.

Gentlemen:—I am greatly pleased with your Dry Cell Batteries, and have no more trouble as of old. They are a great success, and the profession are greatly indebted to you for them.

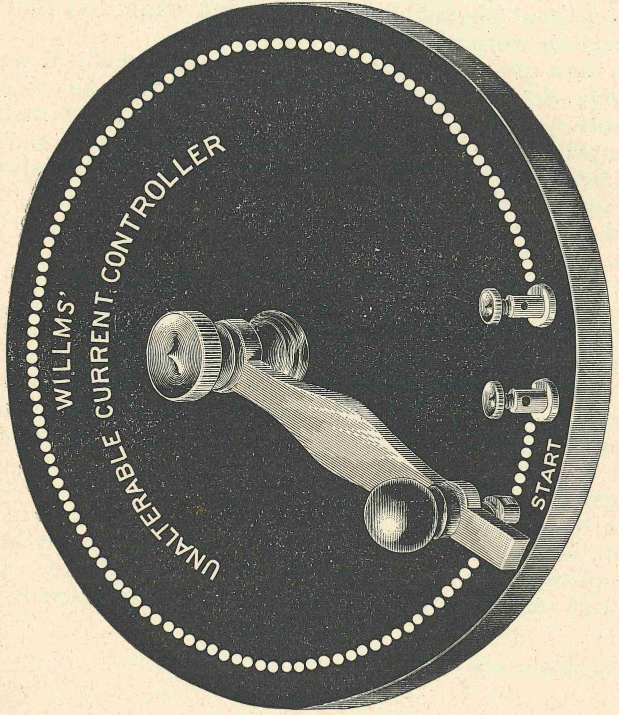
Yours truly,

507 N. 14th Street.
T. GRISWOLD COMSTOCK, M. D.

List of Electrodes suitable for these Batteries furnished on application.
See page 449.

CHLORIDE OF SILVER DRY BATTERIES.

"WILLMS" DRY CURRENT CONTROLLER



List of Electrodes suitable for these Batteries furnished on application.
See page 448.

CONTAINING INTERCHANGEABLE CELLS.

NO. 7A.—THE "LORD BALTIMORE" FARADIC BATTERY.

Very frequently physicians prescribe Faradic Batteries to their patients for home use, and the intelligent doctor being fully aware that those we manufacture are the cheapest, provided quality is taken into consideration, does not hesitate to recommend the purchase of a CHLORIDE OF SILVER DRY CELL FARADIC BATTERY. When, however, such an order reached our agents, it was found that a $10 Battery was the cheapest that could be obtained, and many customers not caring to spend this amount were compelled to buy an *antiquated troublesome acid or fluid Battery*. We have constructed, therefore, an instrument, as shown in cut on page 451, at a price within the reach of all. It meets all the requirements of a cheap but first-class machine. The case is of mahogany, highly polished, and measures only 4x5x2 inches. It is not only the best made and cheapest Faradic Battery on the market, but it is also the most economical to maintain. No destructive acid! No corrosive material! ABSOLUTELY NO LOCAL ACTION! It is a *comfort at home*, and *invaluable when traveling!* It is so simple that a child can use it.

To start the current it is only necessary to place the cell-block between the metal springs in such a way as to bring them and the metal strips on the side of the block in good contact. See that the "buzzer" spring is properly adjusted, and the Battery will work without further trouble or interference.

Owing to the care with which this Battery is made, the *currents are perfectly smooth*. It will furnish a PRIMARY, a SECONDARY, or a COMBINED CURRENT, as desired. All three of the currents can be modified to suit the most delicate child, and can be increased to meet the requirements of the most robust man. The apparatus is provided with a pair of conducting cords, a pair of handsome nickel-plated Electrodes and a pair of ebonite handles.

In this Battery we have solved the problem of making a strictly first-class instrument at a *very moderate cost*, and we are convinced that, taking into consideration its many *excellent qualities*, its completeness and its fine finish, it is the cheapest Battery on the market to-day.

Life of Battery Cell, 40 hours.

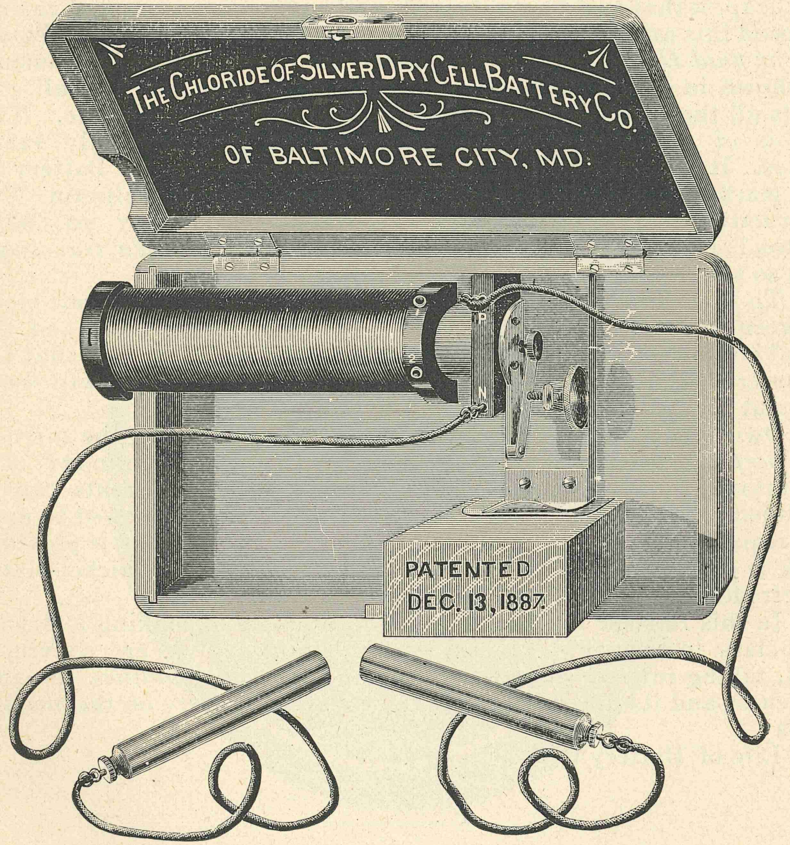
Price of Battery complete	$6 50
Price of renewing and restoring Cell-Block when it becomes exhausted	75

(If Cell-Block is ordered to be returned by mail, add 7 cents postage.)

See page 451.

List of Electrodes suitable for these Batteries furnished on application.

THE "LORD BALTIMORE" FAMILY FARADIC BATTERY.


THE CHLORIDE OF SILVER DRY CELL BATTERY CO.
OF BALTIMORE CITY, MD.
PATENTED DEC. 13, 1887.

No. 7A.

See page 450.

List of Electrodes suitable for these Batteries furnished on application.

NO. 7.—"POCKET" FARADIC BATTERY.

In this battery we have met the want which every physician recognizes—an instrument of the type commonly known as the Pocket Battery—of beautiful finish and low price, with every quality satisfactory to the user, and with all the *trouble and nastiness of the wet cell entirely banished.* Being small and light, and at the same time operated by a permanently closed dry cell, producing a powerful current, it can be carried about without discomfort, or fear of ruining the clothes or instruments of the owner. Thousands of them are now snugly reposing in the emergency satchels of as many physicians throughout the country, ready to respond whenever they are called upon, for there is ABSOLUTELY NO WASTE OF THE ELEMENTS when the battery is not in operation. In cases of poisoning, suspended animation, &c., &c., a physician *needs just such an instrument,* and needs it AT ONCE. This battery is also a great favorite with the Medical Profession when prescribing a Faradic Machine to patients for home use.

This instrument is put up in a handsomely finished mahogany case, 8½x4½x2 inches, and furnished with a pair of conducting cords, one pair ebonite handles, one pair nickel-plated canulas, and one pair flannel-covered carbon Electrodes. The induction coil, giving three currents—primary, secondary and combined—is of superior make and finish, and has no equal anywhere in the uniformity and smoothness of its current.

A cell-block of this battery will yield 100 hours of actual work, costs but 1½ cents per hour to operate. Each cell is secured in position on floor of its box by a vertical pin passing through it, and held there by the large set screw shown in cut.

Price of battery, complete..........	$10 00
Charge for renewing and restoring cell-block, when it becomes exhausted...........	1 50

See page 453.

LEXINGTON, MO., July 27th, 1891.

THE CHLORIDE OF SILVER DRY CELL BATTERY CO.,
Baltimore, Md.

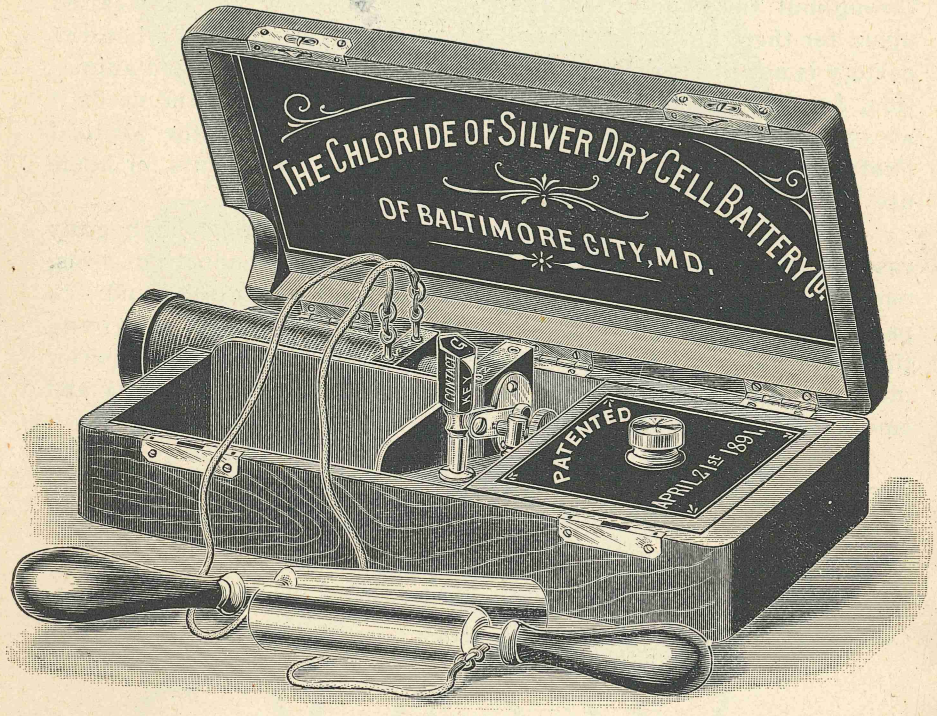
GENTLEMEN:—"The proof of the pudding is in the eating." Just so sure as a man gives your battery a test, just that sure will he keep it in preference to anything else. It is the grandest improvement on the fluid machines that was ever invented. As for myself, I would not have any other, as long as I could get the Dry Cell. Mine is a treasure, and I like it more and more.

Respectfully,

N. B. PAYNE, M. D.

List of Electrodes suitable for these Batteries furnished on application.

"POCKET" FARADIC BATTERY.


THE CHLORIDE OF SILVER DRY CELL BATTERY Co.
OF BALTIMORE CITY, MD.
PATENTED
APRIL 21st 1891.

No. 7.

See page 452.

List of Electrodes suitable for these Batteries furnished on application.

NO. 6.—"UPRIGHT" FARADIC BATTERY.

The No. 8 Faradic Battery containing "Willms" Dry Current Controller, having met with such a favorable reception from the medical profession, we have been encouraged to act upon the advice received from numbers of our friends among the physicians of the country to devise a Faradic Battery containing a similar Current Controller, but of a form which would permit us to sell it at a price that would place it within the *reach of every family*, thus enabling the profession to prescribe it to those patients who are in need of Faradic treatment but the seat of whose ailment is in *very sensitive portions of the body*, precluding the use of Batteries which do not contain such an instrument for delicately varying the current strength. Our "Upright" Faradic Battery, No. 6, fully answers these requirements and is, besides, an instrument which we have no hesitancy in recommending to those physicians who do not care to purchase a higher grade instrument for their professional wants but who naturally wish to make a *small investment to the very best advantage*.

Each one of these instruments is contained in a handsomely finished mahogany battery case, presenting an elegant appearance, while all the metal parts are heavily nickel-plated. The Current Controller supplied with this instrument, while not being, of course, as fine as the one furnished with the No. 8 machine, is still an immense improvement over any movable coil arrangement that can be obtained, as it is about 7½ inches in circumference, and no other Battery in existence is furnished with a coil of such a length.

This instrument will furnish three currents: The Primary (or so-called direct) current, the Secondary (or induced) current, and a combination of the Primary and Secondary currents. A roomy compartment has been provided in the lower part of the battery case, in which will be found, viz.: Two insulated handles, two sponge Electrodes, two nickel-plated Canulas and one pair silk-covered Conducting Cords.

See page 455.

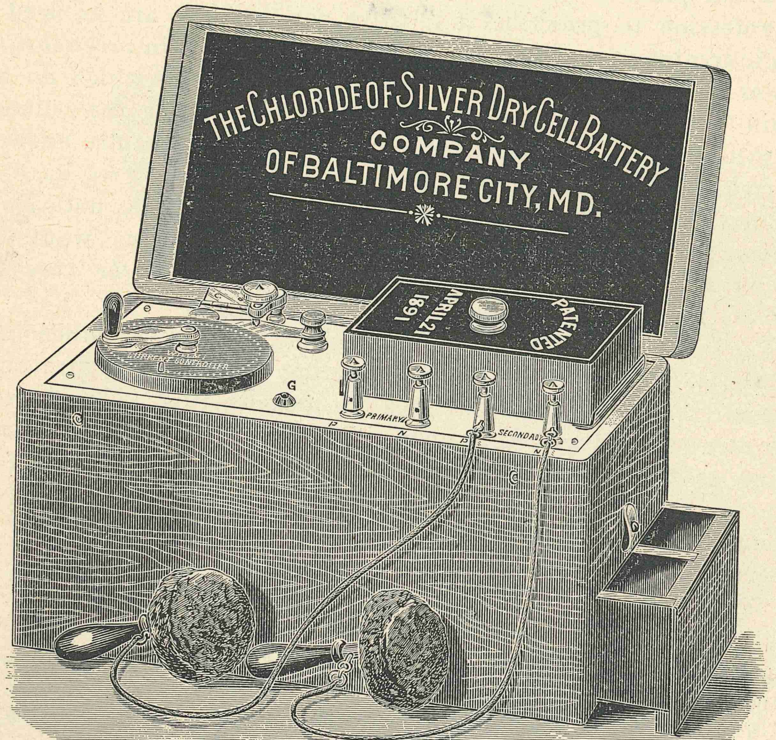
Price of Battery complete..........	$15 00
Charge for renewing and restoring Cell-Block..........	1 50

(As a Cell-Block has a life of *100 actual hours*, it *costs but* 1½ cents for each hour's work obtained from this instrument.)

List of Electrodes suitable for these Batteries furnished on application.

CHLORIDE OF SILVER DRY BATTERIES,

"UPRIGHT" FARADIC BATTERY.



No. 6.

See page 454.

List of Electrodes suitable for these Batteries furnished on application.

CONTAINING INTERCHANGEABLE CELLS.

NO. 5.—"DOUBLE-COIL" FARADIC BATTERY.

This is an elegantly finished instrument, and of a size and shape which commends it to the profession as a visiting Battery of superior merit. It is operated by two Cell-Blocks containing CHLORIDE OF SILVER DRY CELLS, which are arranged in such a manner as to admit of either one or both being used as required; a DuBois-Raymond System Induction Coil, with interchangeable fine and coarse wire winding for secondary current on the outer bobbin; wire horseshoe for modifying primary current; plain and interrupting handles with best quality sponge Electrodes. and silk-covered Conducting Cords.

Put up in a handsomely finished and polished mahogany box, with patent self-locking handle, which securely fastens the box and lid as soon as it is shut and attempt made to lift it.

This style of Battery has always been *extremely popular* with the profession. its size and shape making it *peculiarly well adapted for use as a visiting Battery*. We have, however, made an important improvement in it by the substitution of larger Cell-Blocks containing double the number of cells that were in the former ones and therefore furnishing *double the strength*. One of the Cell-Blocks will yield as much power as two of the previous pattern, so that the operator need use only one for general work and *reserve the second* to be used in combination with the first when an extraordinary powerful current is required. He will thus practice economy, for, each Cell-Block having a life of 100 hours, nearly 200 hours of service will be obtained from the two at a cost of but 1½ cents for each hour of actual work.

As stated above, two secondaries are provided on this machine, *i. e.*, a coarse and a fine, each having a different therapeutical value, while the construction of the coil admits of the most perfect control over the graduations of current strength.

See page 457.

Price of Battery complete		$20 00
Charge for renewing and restoring Cell-Blocks	each	1 50

HAYNEVILLE, ALA., March 11th, 1891.

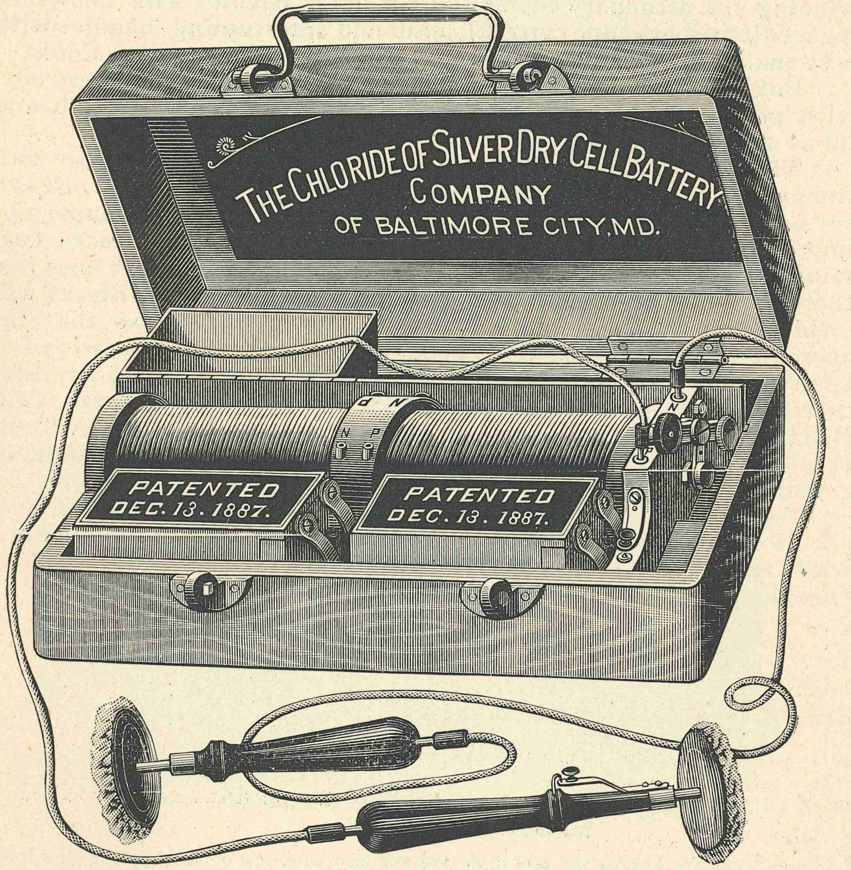
THE CHLORIDE OF SILVER DRY CELL BATTERY CO.,
Baltimore, Md

GENTLEMEN:—During the past three years I have used one of your Split-Top Faradic Batteries, also one of your Double-Coil Faradic and a 32-Cell Galvanic. I had previously used the fluid Bi-Chromate Potash Batteries, but would not return to their use for any consideration. I find your Batteries to excel all others that I am acquainted with in compactness, portability, uniformity and smoothness of current, and all the other qualities that the general country practitioner would desire. In fact, there is no improvement he could wish for. With the exception of occasionally rubbing off the oxidation on the Rheotome, they require no attention whatever. They give a uniform current until the cells are completely worn out.

Very truly, J. A. PRITCHETT, M. D.

List of Electrodes suitable for these Batteries furnished on application.

"DOUBLE-COIL" FARADIC BATTERY.



No. 5.

See page 456.

List of Electrodes suitable for these Batteries furnished on application.

NO. 8.—NEW FARADIC BATTERY FOR PHYSICIANS.

We have received from time to time letters from some of our most prominent gynæcologists and other specialists, asking for a Faradic battery more complete in its appointments, and which would better meet their special needs than anything already on the market.

The Chloride of Silver Cells being much smaller, lighter, the only cells of constant electro-motive force, that will ABSOLUTELY NOT WASTE WHEN NOT IN USE, and being in addition DRY, are the only ones in the world that are suitable for a portable apparatus; and unless a Faradic battery *is portable*, it is really of very little use to the physician. Feeling, therefore, eminently qualified from the character of the cells we manufactured, to take hold of the matter, we did so, and have succeeded in producing an instrument of which we may justly feel proud. Its leading points of superiority are as follows.

1. Being operated by Chloride of Silver Dry Cells, the instrument is portable and cleanly, while the operator is spared the trouble and annoyance of filling and refilling cells with corrosive acids. The current is also absolutely constant—a point possessed by no other form of cells used for Medical purposes.

2. Sufficient cells have been provided to produce a current strong enough for any class of work for which such an instrument would be used.

3. Instead of using the common method of increasing and modifying the current strength by means of a movable coil, we have placed a "WILLMS'" Dry Current Controller permanently in the circuit, which permits the operator to graduate the current strength so finely, that it may be *applied with perfect safety to the most delicate portions of the human body*, such as the mucous membrane of throat, penis, vagina, rectum, &c., &c. Such a controller, being twelve inches in circumference, is equivalent to a movable coil of this length so far as the variation of current strength is concerned, while its peculiar construction gives us a much better command over the current.

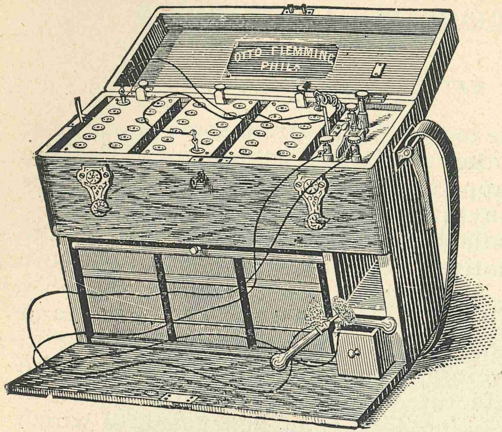
4. Instead of the usual three currents supplied with other forms of such batteries, we furnish a primary and four secondaries, and provisions having also been made to combine the primary with each one of the secondaries, the operator has nine distinct currents at his command.

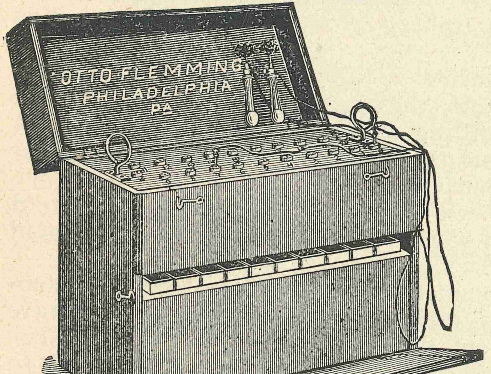
5. In addition to the usual Rapid Interrupter furnished with all Faradic batteries, we also supply a Slow Interrupter of the most approved pattern. A Pole Changer for reversing the current will also be found on apparatus; also a Current Breaker, and a Switch for placing one, two, or all three of the cell-blocks in the circuit.

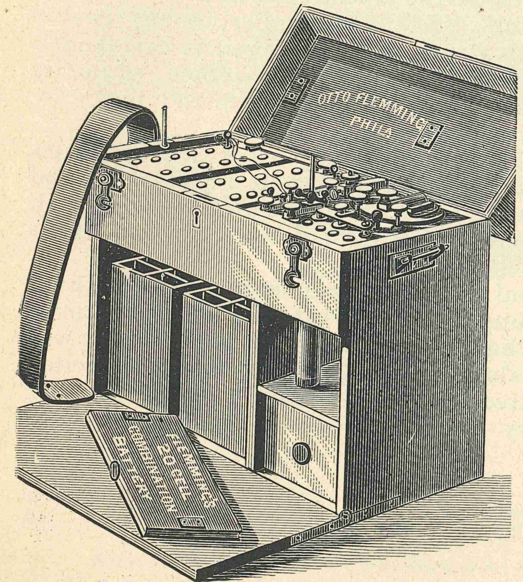
Cost of operating battery is about 1½ cents for each hour of actual work.

Price of No. 8 Battery, complete	$35 00
Cost of renewing and restoring largest cell-block	1 50
Cost of renewing and restoring small cell-block	75

List of Electrodes suitable for these Batteries furnished on application.







FLEMMING'S ELECTRICAL APPARATUS.

FLEMMING'S PORTABLE CONSTANT GALVANIC CURRENT BATTERIES.—This form of Galvanic Battery is the most complete ever offered to the profession. The different sizes, from 10 to 40 cells, are so made in sections of 10 cells each that any one section, or any number of sections, can be used independently of the others, or all used together. The elements are zinc and carbon, the fluid bichromate of sodium, and the cells are hard rubber, which is lighter and more durable than glass. Covering the cells, when not in action, is a Hydrostat or rubber-cushioned sliding-board, which is pressed down tightly upon them when the lid is closed, thus preventing the fluid from spilling while being transported, or if by accident it should be upset. Unlike all other Batteries, the cells in this can be taken out in front for re-charging, obviating the annoyance and risk of breakage in removing the plates on top. Connected with the binding posts for receiving the Electrode cords is a Commutator for reversing the Polarity of the Electrodes, or for interrupting the current by hand. On special orders, an "Automatic Rheotome," for interrupting the current, or a "Current Controller," for varying the current at will and avoiding shock, is attached. The Walnut Cases of these Batteries are highly polished, and all the metallic parts finely-nickel-plated.

10-cell Battery	$25 00
20- "	45 00
30- "	65 00
With Mil-am-meter, addit'nal..	25 00
With Cur't Contr'er, addit'nal..	10 00

GALVANIC FAMILY BATTERY.—There is a demand among physicians for a cheap Galvanic Battery that may be put into the hands of their patients. To meet this want we have designed a simple Galvanic Battery to suit any desired number of cells. The cells are of glass set in a movable frame which can be easily raised up and set by two screw heads. The elements are zinc-carbon, and in the cut the manner is shown in which a certain number of cells are brought into circuit.

6-cell Battery	$7 00
8- "	9 00
10- "	11 50
16- "	17 50
20- "	22 00
30- "	32 00

PORTABLE COMBINATION BATTERIES.—(*Physician's style, or Galvanic and Faradic apparatus combined in one case*).—Galvanic part same as the Constant Galvanic Battery above described, and the Faradic part, same as the No. 1 Faradic Battery, with rapid interrupting helix.

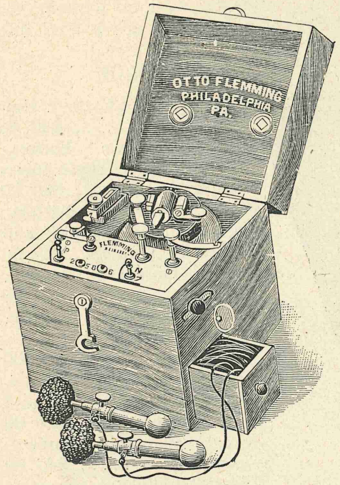
10-cell Combination Battery....	$35 00
20- " " "	55 00
30- " " "	75 00

The same style of Battery as above, but Faradic aparatus provided with *rapid* and *slow* interrupter:

10-cell Combination Battery...	$50 00
20- " " "	70 00
30- " " "	90 00

FLEMMING'S ELECTRICAL APPARATUS

FLEMMING'S PORTABLE FARADIC (INDUCTION) BATTERIES.



No. 1.

No. 00 Faradic Family Battery, plain finish, with conducting cords and one pair tubular tin handle electrodes.

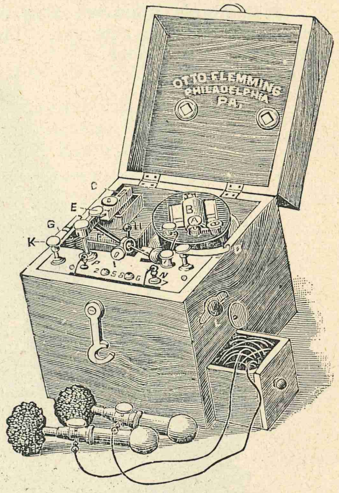
Price.....$10 00

No. 0 Faradic Family Battery of better finish, with conducting cords and 1 regular sponge and 1 tin handle electrodes.

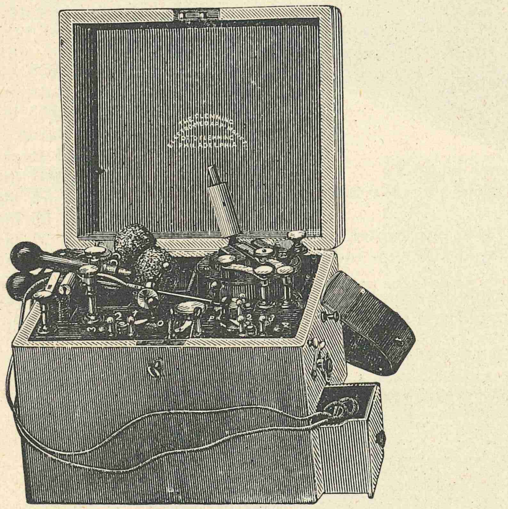
Price.....$12 00

No. 1 Faradic Family Battery, highly finished and more complete than the former; including best conducting cords and 1 pair of fine sponge electrodes.

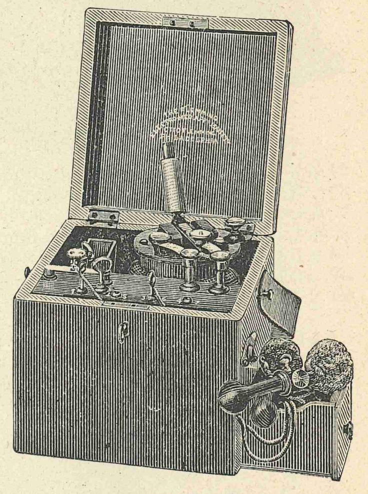
Price.....$15 00



No. 1
(With Rapid and Slow Interrupters.)



No. 2.



No. 3.

No. 2 Faradic Battery, finely finished; coil one inch longer and more powerful, but with rapid vibrator only. In addition to its completeness, it is provided with a commutator or pole changer.

Price.....$20 00

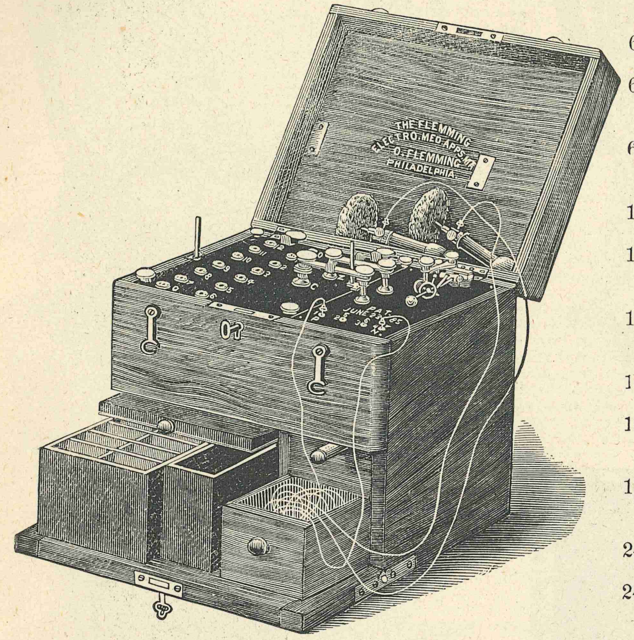
No. 3 Faradic Battery. This Battery is the finest and most complete of its kind ever manufactured. It is provided with a slow and rapid Rheotome, or current interrupter; a Commutator, polarity changer; Scales, by which the primary and secondary currents may be graduated to the utmost delicacy or the greatest power; and with our new patent Galvanic Cell. This cell, when charged, is so made that when not in action the zinc is taken out of it altogether and placed in a vulcanite cell provided for the purpose. The aperture through which it passes is covered by a rubber Hydrostat, making the cell perfectly fluid-tight and saving both the fluid and the zinc from the effect of splashing in transportation, or of immersion in case of upsetting. By this plan also the cell can be filled nearly to the top and the zinc be made twice the usual length; It will thus produce a stronger current and last a longer time. This battery is enclosed in a handsome walnut case, 7¼x7½x8¼ inches, has all its metallic parts finely nickel-plated, and weighs when charged, only ten pounds.

Price.....$30 00

FLEMMING'S ELECTRICAL APPARATUS.

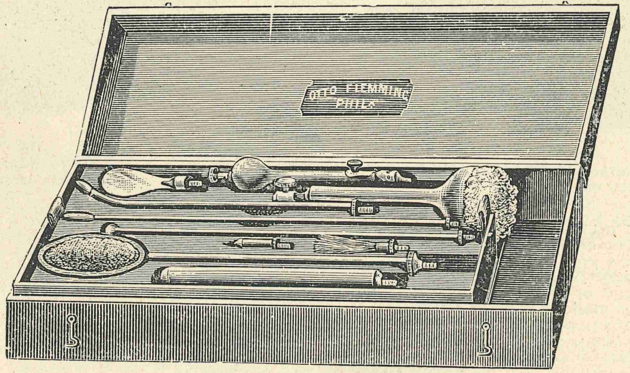
FLEMMING'S BATTERIES.

Flemming's Improved Portable Galvanic Physicians' Batteries, with or without the combination of a faradic coil. The number of cells of this style of battery are divided into sections of six or twelve.



	PRICE.
6-cell Galvanic Battery, simple	$20 00
6-cell Galvanic Battery, combination, rapid interrupter	$30 00
6-cell Galvanic Battery, combination, rapid and slow interrupter	$38 00
12-cell Galvanic Battery, simple	$30 00
12-cell Galvanic Battery, combination, rapid interrupter	$40 00
12-cell Galvanic Battery, combination, rapid and slow interrupter	$48 00
18-cell Galvanic Battery, simple	$40 00
18-cell Galvanic Battery, combination, rapid interrupter	$50 00
18-cell Galvanic Battery, combination, rapid and slow interrupter	$58 00
24-cell Galvanic Battery, simple	$55 00
24-cell Galvanic Battery, combination, rapid interrupter	$67 00
24-cell Galvanic Battery, combination, rapid and slow interrupter	75 00
30-cell Galvanic Battery, simple	65 00
30-cell Galvanic Battery, combination, rapid interrupter	77 00
30-cell Galvanic Battery, combination, rapid and slow interrupter	85 00
36-cell Galvanic Battery, simple	75 00
36-cell Galvanic Battery, combination, rapid interrupter	87 00
36-cell Galvanic Battery, combination, rapid and slow interrupter	95 00

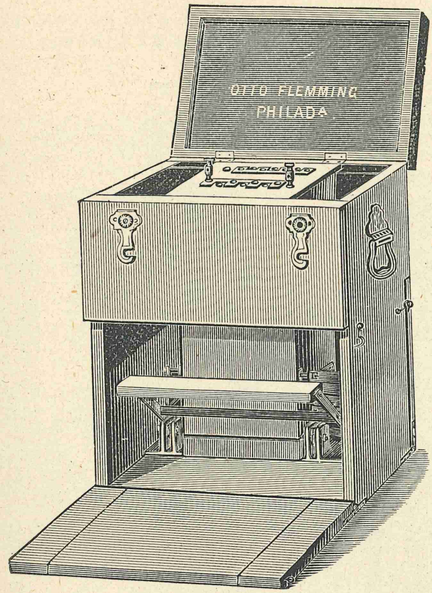
FLEMMING'S ELECTRODES, USED IN ELECTRO-THERAPEUTIC APPLICATION.



No. 1 Case, containing 11 Electrodes and 1 pair of cords	$12 00
No. 2 Case, containing 20 electrodes and 1 pair of cords	20 00

See page 393.

FLEMMING'S ELECTRICAL APPARATUS.



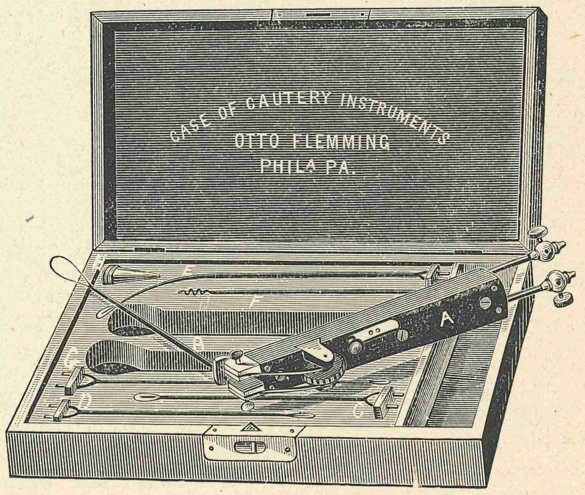
Pat. No. 320.547.

FLEMMING'S CAUTERY BATTERIES FOR OFFICE USE.

SCALE OF PRICES OF BATTERIES, ELECTRODES AND PARTS PERTAINING TO:

Single Cell Cautery Battery, including double Conducting Cord, without any Cautery Electrodes	$ 30 00
Double Cell Cautery, including double Conducting Cords	50 00
Single Cell Cautery Battery with Commutator, arranged to serve as a Cautery and a ten (10) Cell Galvanic Current Battery, including cords for Cautery and Galvanic Currents and one pair of Sponge Electrodes	50 00
Double Cell Cautery with Commutators for converting the Cautery into a twenty (20) Cell Galvanic Battery, 2 sets of Cords and Sponge Electrodes	95 00
The Universal Battery, serving as a Double Cell Cautery, a twenty (20) Cell Galvanic Battery and provided with a first-class Induction Coil of rapid and slow interruptions, with 2 sets of cords and Sponge Electrodes.	120 00

LIGHT CAUTERY ELECTRODES FOR NASO-PHARYNGEAL OPERATIONS.

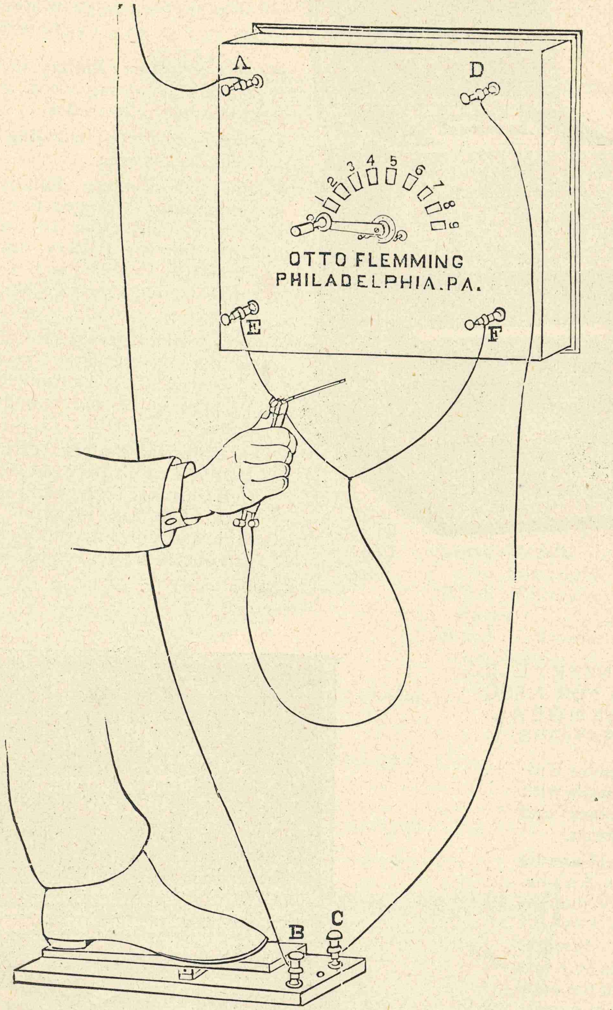


A.—Ecraseur or Universal Handle with circuit closer and shifting catch.	
B.—Parallel Cannula Platinum Snare-wire and Windlass. (*See Cut, A and B.*)	10 00
C.—Short, Straight Electrode or Knife for use in the anterior part of nares.	2 00
D.—Post-Nasal Electrode for introduction behind the soft palate	2 00
E.—Long Knife Electrode for introduction through the nares to posterior ends of tubinated bones and pharynx	$ 2 00
F.—Spiral or Moxa Electrode	2 00
G.—Sharp pointed Electrode	2 00
H.—Dr. J. Solis-Cohen's Pharyngeal Electrode, to protect the vault of the pharynx	3 50
I.—One set of Dr. H. Allen's Nasal Specula	1 50
Complete set of Naso-Pharyngeal Cautery Electrodes in Morocco Case	25 00

See page 393.

FLEMMING'S ELECTRICAL APPARATUS.

CAUTERY-CARBON-RHEOSTAT AND PEDAL RHEOTOME FOR USE IN CONNECTION WITH THE WIRES OF A 100 VOLT INCANDESCENT LIGHT CIRCUIT.



The accompanying device represents a Cautery Rheostat with Pedal Circuit Closer, for calling any incandescent light circuit into service for actual operations. By means of the Rheostat, the proper degree of heat on the Cautery Electrode being first ascertained and adjusted, it may be introduced cold, and the current then closed by the Pedal Rheotome.

Price, Rheostat and Pedal Rheotome, without Conducting Cords.......	$35 00
Price, Heavy Conducting Cautery Cords..................................	2 00

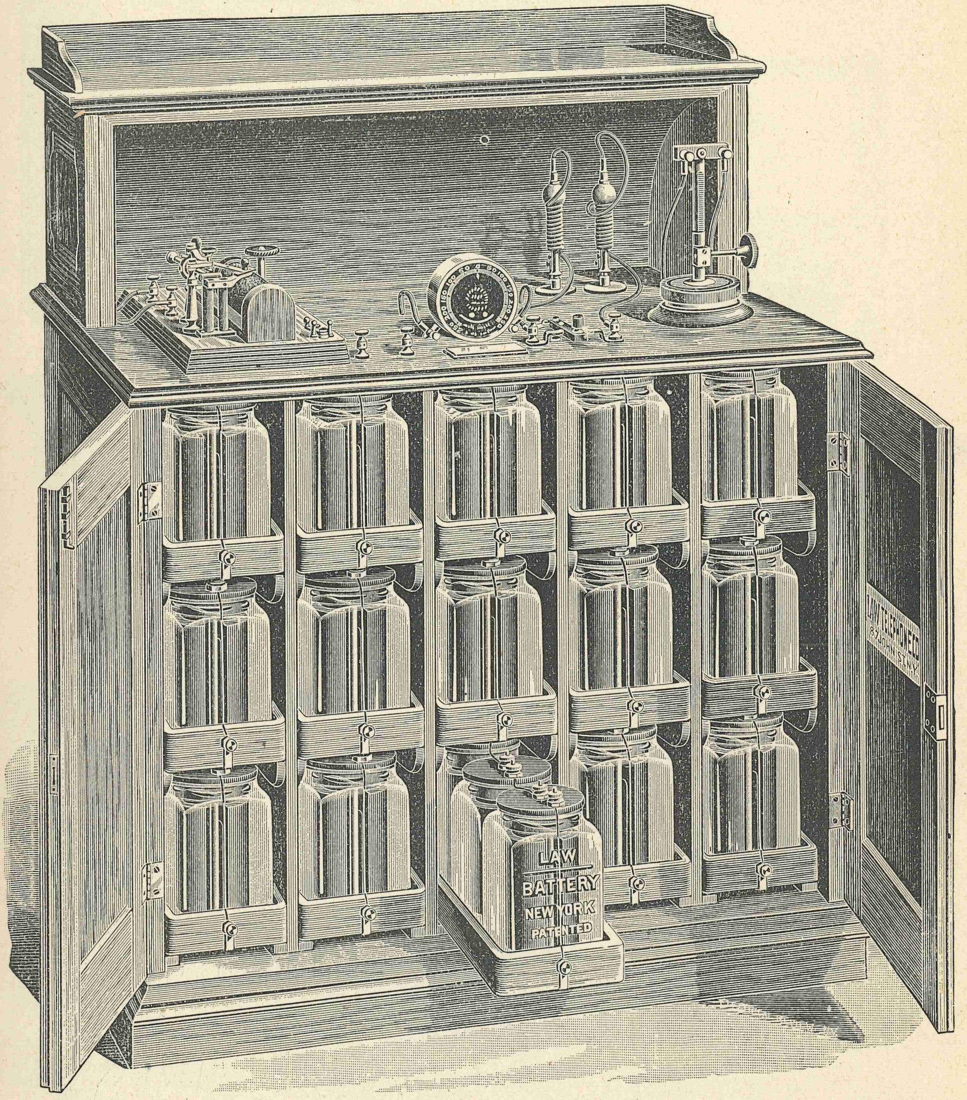
DEVISED BY **OTTO FLEMMING,**

1009 Arch St., Philadelphia, Pa. Manufacturing Electrician.

See page 392.

Law Electric Batteries.

THE LAW ELECTRO-THERAPEUTICAL CABINET OFFICE OUTFIT.



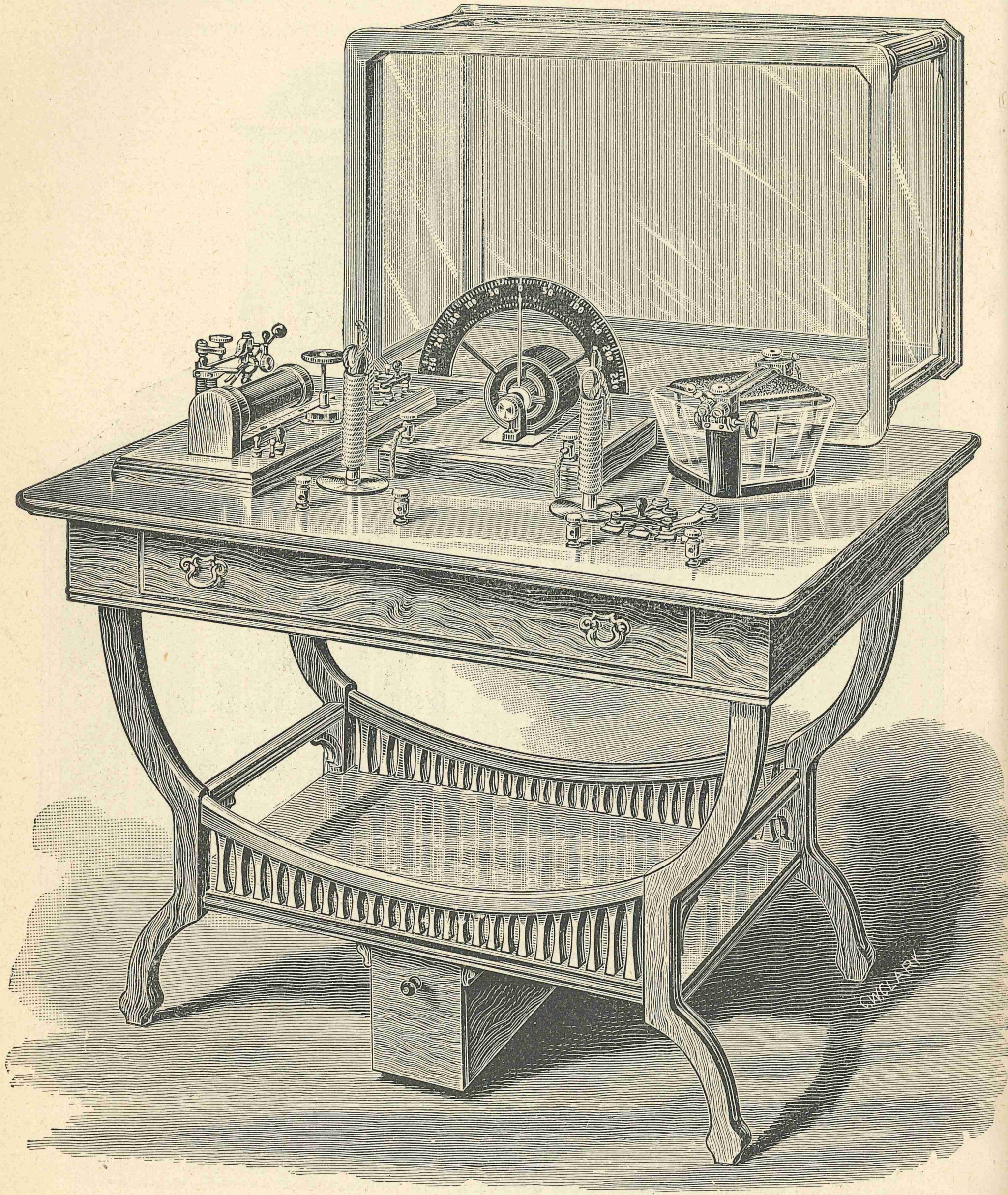
Solid Antique Oak Roll Top Desk Cabinet, with finished back and ball-bearing castors. Has 15 Trays, each holding 4 cells latest improved *Law* Battery. Each Tray can be drawn out for inspection of Cells and put back without disturbing wire connection, the circuit opening and closing automatically. This feature is entirely new, is one of great convenience, and admits the full number of Cells in a Desk only 23 inches deep, 30 high, 33 long—never before accomplished. It is equipped with a new DuBois-Raymond Faradic apparatus, just out, and the *New* Bailey Current Controller, also just out. Besides these there is the Mil-am-pere Meter (any make Meter may be used), Pole Changing Switch, etc. Can be set and cared for by a child. Send for catalogue.

Price, complete..	$225 00

Subject to discount. See page 393.

LAW ELECTRIC BATTERIES.

LAW ELECTRO-THERAPEUTICAL TABLE OFFICE OUTFIT.



Antique Oak Table, 23 inches deep, 30 inches high, 33 inches long; Plate Glass (double thick) Cover; Top Drawers for Electrodes and Smaller Drawer for two cells on Faradic Coil. The Meter shown is new, and possesses features that recommend it where accuracy and easy reading are desired. The Cells are placed at the most convenient point, and two wires, one from terminal zinc, the other from first carbon, are led to binding posts in rear of table.

Price, Sixty Cells and Table as shown..............................$200 00

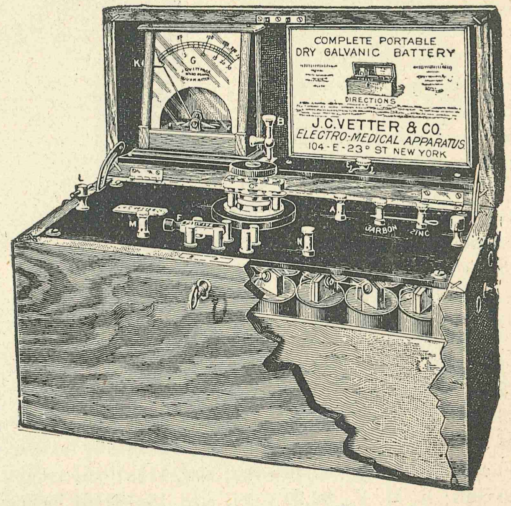
Subject to discount. See page 393.

J. C VETTER & CO.'S

Standard Electro-Medical Apparatus

Awarded First Diploma and Medal, World's Columbian Exposition.

COMPLETE PORTABLE DRY GALVANIC BATTERY.



The Battery consists of 24 Vetter Dry Cells that furnish a strong and constant current of high electromotive force. They need no care or attention, and are guaranteed for two years, and then can be replaced at slight cost.

The Carbon Rheostat controls the current absolutely and to the smallest fraction of a miliampere, without the slightest shock to the patient.

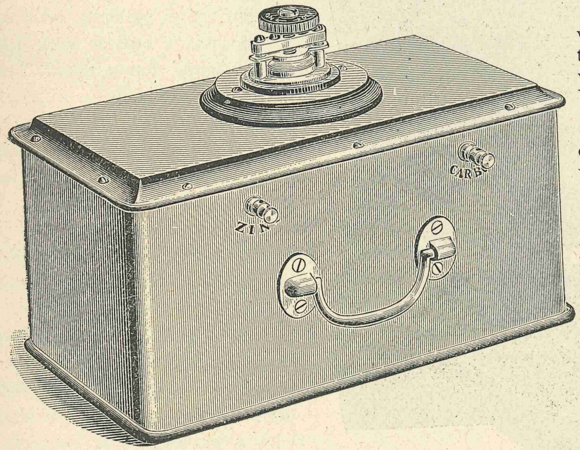
The Miliampere Meter is direct reading, accurately calibrated and standardized; the pointer is controlled solely by the current which it registers accurately from 1-10 to 500 miliamperes.

By means of the *Vetter Current Adapter*, the upper part of the battery can be used independently of the cells as a switch-board for utilizing the *Incandescent Current* in Electro Therapeutics.

Each Battery is furnished with Pole Changer, Conducting Cords, Electrodes, etc., and is handsomely encased in highly polished antique oak.

Price, complete with Meter..	$75 00
Price, without Meter..	50 00

VETTER'S PORTABLE DRY GALVANIC BATTERY.



These Batteries are supplied with Vetter Dry Cells, connected in series, the terminals of which are connected with the Vetter Carbon Rheostat.

The Cases are Finished in either mahogany or walnut, with nickel-plated mountings.

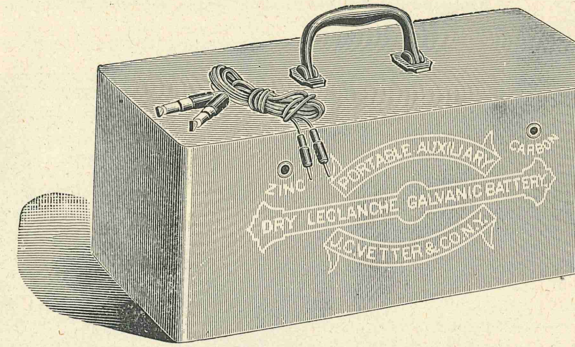
Conducting Cords, one pair Universal Handles and one pair 2-inch Sponge Discs are furnished with each Battery. All the metallic parts are nickel-plated.

These Batteries are made up in various sizes, the electromotive force corresponding to the number of cells in series, as follows:

18 cells;	E. M. F., 28.44 volts;	size, $11\frac{1}{2}$x$6\frac{3}{8}$x$6\frac{1}{2}$ inches; price....................	$25 00
24 cells;	E. M. F., 37.92 volts;	size, 15x$6\frac{3}{8}$x$6\frac{1}{2}$ inches; price....................	30 00
30 cells;	E. M. F., 47.40 volts;	size, $11\frac{3}{4}$x10x$6\frac{1}{2}$ inches; price....................	35 00
40 cells;	E. M. F., 62.20 volts;	size, 15x$10\frac{1}{4}$x$6\frac{1}{2}$ inches; price....................	44 00
50 cells;	E. M. F., 79.00 volts;	size, 19x$9\frac{7}{8}$x$6\frac{1}{4}$ inches; price....................	52 00

J. C. VETTER & CO.'S STANDARD ELECTRO-MEDICAL APPARATUS.

DRY AUXILIARY BATTERIES.


ZINC
CARBON
PORTABLE AUXILIARY
DRY LECLANCHE GALVANIC BATTERY
J.C.VETTER & CO. N.Y.

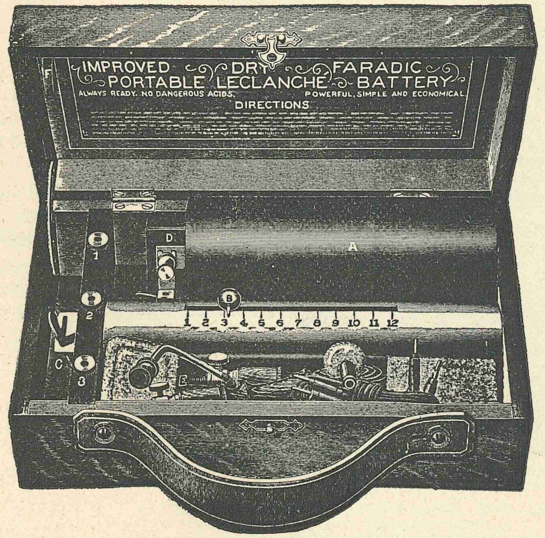
These Auxiliary Batteries consist of a series of No. 1 VETTER DRY CELLS that are put up in plain, smooth finished boxes, with handles, and are practically sold at the price of the cells only.

They furnish a convenient means of increasing the power of the Complete Portable Batteries when a very strong current is required; also for supplying current for the Vetter Table Base and Complete Switch Board

They are put up in various sizes, as follows:

12 cells; E. M. F., 19.96 volts; size, 7½x6⅜x6½ inches; price	$10 00
18 cells; E. M. F., 28.44 volts; size, 11½x6⅜x6½ inches; price	15 00
24 cells; E. M. F., 37.92 volts; size, 15x6⅜x6½ inches; price	20 00
30 cells; E. M F., 47.40 volts; size, 11¾x10x6½ inches; price	25 00
40 cells; E. M. F., 62.20 volts; size, 15x10¼x6½ inches; price	34 00
50 cells; E. M. F., 79.00 volts; size, 18x9⅞x6¼ inches; price	42 00

FARADIC BATTERY.


IMPROVED DRY FARADIC
PORTABLE LECLANCHÉ BATTERY
ALWAYS READY. NO DANGEROUS ACIDS.
POWERFUL, SIMPLE AND ECONOMICAL.
DIRECTIONS
A
B
C
D
1
2
3
1 2 3 4 5 6 7 8 9 10 11 12

No. 4.

This is a thoroughly portable battery; it is specially adapted for physicians' outside work and for patients' home use. The current emanates from a No. 3 Vetter Dry Cell.

Each battery contains 1 pair Universal Handles, 1 pair Flat Sponge Electrodes (Erb.), 1 Small Universal Electrode, 1 Elbow Extension Piece, 1 Oblong Plate Electrode, and 1 pair Conducting Cords.

The general style, as shown in the cut, is on the half-box principle. It can be opened out perfectly flat, and is provided with a leather handle for carrying.

The metal parts are nickel-plated, and the case is of antique oak, handsomely polished on all sides.

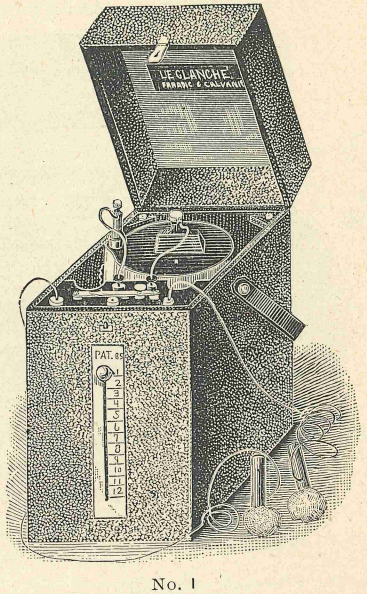
Price...$10 00

J. C. VETTER & CO.'S STANDARD ELECTRO-MEDICAL APPARATUS.

FARADIC BATTERIES.

Batteries No. 1. and No. 2 are supplied with either a Leclanche Liquid Cell or a Vetter Dry Cell. They are well made and durable. No. 1 battery is intended mainly for patients' use; the case is of wood, covered with leatherette.

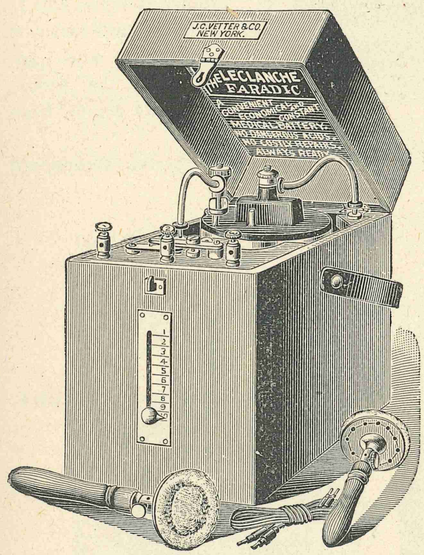
Price..$10 00


LECLANCHE
PAT.
1 2 3 4 5 6 7 8 9 10 11 12

No. 1

No. 2 battery is similar to No. 1, but is more suited to physicians. The case is of highly polished antique oak.

Price..$14 00


J.C.VETTER & CO. NEW YORK.
THE LECLANCHE FARADIC
A CONVENIENT ECONOMICAL AND CONSTANT MEDICAL BATTERY.
NO DANGEROUS ACIDS.
ALWAYS READY.
1
2
3

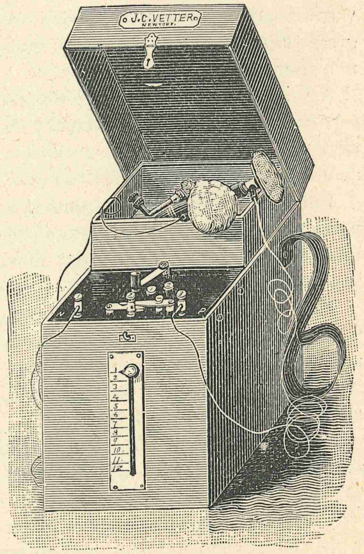
No. 2.

No. 3 battery is supplied with four No. 2 Vetter Dry Cells, connected in series of two cells each, permitting the use of two or four cells, and giving a powerful current.

The case is of highly polished antique oak, and has a tray for electrodes.

Conducting Cords and Electrodes are furnished with each of these batteries.

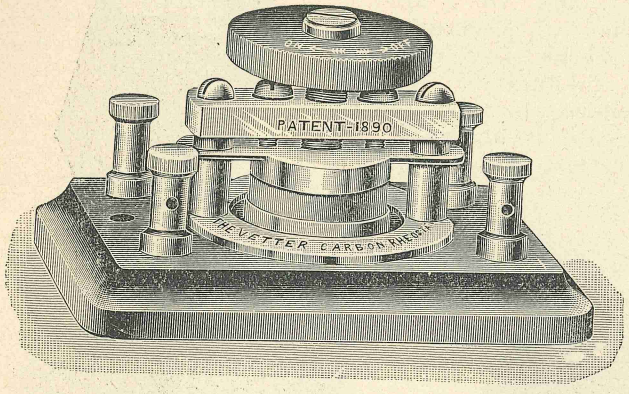
Price..$20 00



No.3.

J. C. VETTER & CO.'S STANDARD ELECTRO-MEDICAL APPARATUS.

VETTER CARBON CONTROLLER.



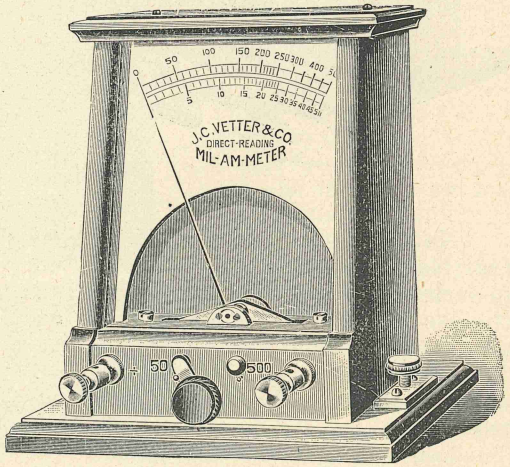
The fundamental principle adopted in the construction of this Rheostat is the effect of variation in resistance which takes place in a quantity of carbon subjected to a change of pressure.

Its government of the current is absolute and reliable, the carbon resistance is susceptible to to the slightest variation in pressure when applied by the screw, giving any degree, from an almost imperceptible current to the full power of the Battery.

It imposes equal work upon all the cells of a Battery, maintaining the current throughout the series of uniform and equal strength.

Price..Net $15 00

VETTER STANDARD MILLIAMPERE METERS.



These Meters are accurately calibrated and standardized. They are vertical and direct reading, which are great advantages over horizontal, indirect reading Meters.

As there is a separate coil provided for each scale, absolute accuracy is assured, there being no unreliable shunts employed in these instruments.

The extra length of the scales is particularly convenient, as it admits of finer graduations of the current than in any other Meter.

They are made in two styles—one with jeweled bearings and end pieces, and the other with hardened steel bearings—and are mounted in well-made mahogany or antique oak cases.

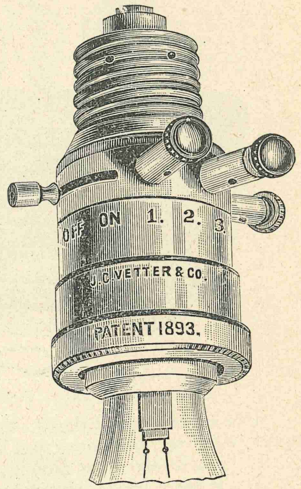
When ordering state what readings are desired, as they are made with three different graduations—1-10 and 1-100, 1-25 and 1-250, 1-50 and 1-500.

Full-Jeweled Milliampere Meter..............................	Net $35 00
Hardened Steel Bearings, no Jewels..........................	Net 25 00

J. C. VETTER & CO.'S STANDARD ELECTRO-MEDICAL APPARATUS.

THE VETTER CURRENT ADAPTER OR INCANDESCENT CURRENT TAP.

(Patented 1893. INTERNATIONAL PATENTS.)


OFF ON 1. 2. 3
J.C.VETTER & CO.
PATENT 1893.

No. 2.

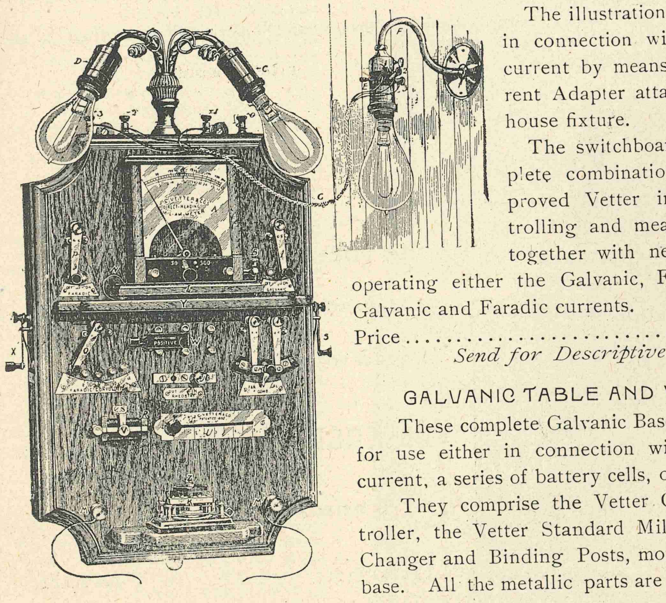
This is a new and simple device for utilizing the constant incandescent current in electro-therapeutics. The Galvanic and Faradic currents can now be safely obtained from the constant incandescent current by means of the Vetter system of electro-medical apparatus.

The Vetter Current Adapter also utilizes the incandescent current to operate *Electric Motors*, *charge Storage Batteries*, *extend a Drop Light*, *operate Electric Bells*, *Miniature Lamps*, *etc.*

Adapters are made in two styles, the prices of which are as follows:

No. 1, for Galvanic and Faradic work and Charging Storage Batteries, 2 posts and switch, with cords..	$5 00
No. 2, for all purposes, including Motor work, Drop Lights, etc., 3 posts and switch, with cords......	6 00

GALVANIC AND FARADIC SWITCHBOARD FOR INCANDESCENT OR BATTERY CURRENTS.



The illustration shows the apparatus in connection with the incandescent current by means of the Vetter Current Adapter attached to an ordinary house fixture.

The switchboard comprises a complete combination of the latest improved Vetter instruments for controlling and measuring the currents, together with necessary switches for operating either the Galvanic, Faradic, or combined Galvanic and Faradic currents.

Price..$100 00

Send for Descriptive Circular.

GALVANIC TABLE AND WALL BASES.

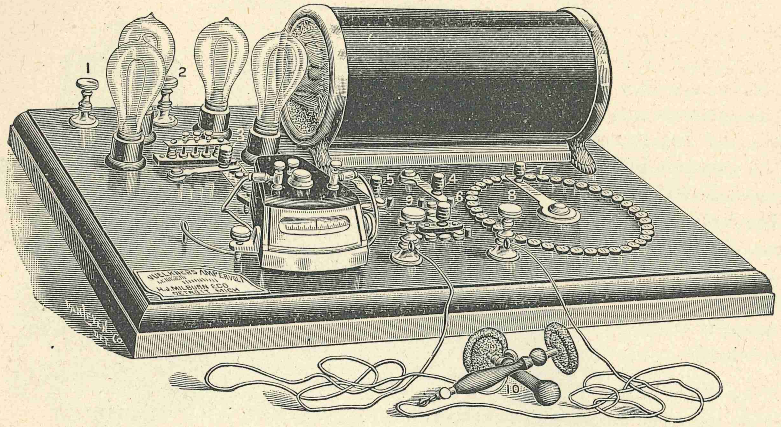
These complete Galvanic Base Boards are intended for use either in connection with the incandescent current, a series of battery cells, or auxiliary batteries.

They comprise the Vetter Carbon Current Controller, the Vetter Standard Milliampere Meter, Pole Changer and Binding Posts, mounted on a handsome base. All the metallic parts are nickel-plated, and the woodwork is handsomely polished quartered oak.

Table Base, with Jeweled Meter and Detachable Controller, price..................	$60 00
Wall Base, with Jeweled Meter and Detachable Controller, price..................	60 00
Table Base, Meter not Jeweled and Permanently Attached Controller, price..........	50 00
Wall Base, Meter not Jeweled, price...	50 00

Conducting Cords included.

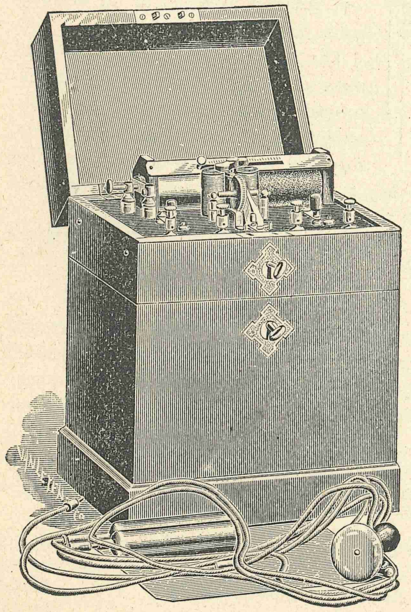
Voelkner's Ampere-Volt Potential Controller.



The advantages of the V. A. V. P. C. over all other styles of batteries are its durability, power, economy, constancy and simplicity.

1. Durability—Not having any acids, it is absolutely non-corrosive.
2. It has a higher electro-motive force, which can be graduated from minimum to maximum capacity without the slightest shock.
3. Economy—Costs five mills per hour, and nothing to get out of repair.
4. Simplicity—The entire apparatus is controlled by five switches, and one can operate it after a few minutes' inspection.
5. Constancy—The source of supply never polarizes, and is perfectly controlled by the large resistance coil.

Send for complete description.



THE VOELKNER FARADIC BATTERY.

A most complete and desirable Family Battery.

Send for complete description.

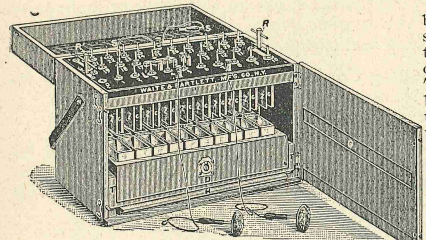
Voelkner Electrical Works,

5 and 7 Fort Street East,

Detroit, - - - Mich.

Waite & Bartlett Mfg. Co., New York.

PLUG AND SOCKET GALVANIC BATTERY.



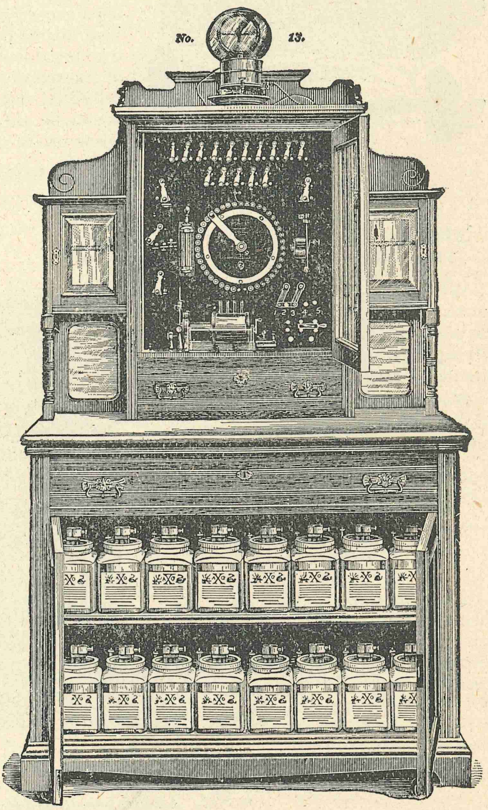
The Battery is provided with the Hydrostat board (H), by means of which the cells are sealed, so that the fluid will not be spilled when the Battery is carried about. Place this Hydrostat board on top of the cells, and close and fasten the door. Turn the rods (RR) until they turn hard. The bottom of the board is covered with rubber. The tops of the cells are beveled, and are forced into the rubber, thus securely sealing the cells. The Hydrostat board is placed under the tray (T) when not in use. The thirty cell, of the above type, will give sufficient current for Apostoli's method of treating fibroid tumors and other gynecological work. The Battery is furnished in a handsome antique oak or mahogany case, finely polished and in five different sizes.

6-cell	List	$12 00
12-cell	List	20 00
16-cell	List	24 00
20-cell	List	30 00
30-cell	List	38 00

See page 393.

Set of cords and sponge Electrodes included with each Battery. Send for catalogue.

RANNEY CABINET.



Complete office cabinets and wall cabinet contain, for use of constant current, 40 cells of "Axo" Leclanche Battery. The cells are the most perfect of their kind, and have stood the test of time and use, and are always furnished, unless some other form is specially desired by purchaser. The current selector is universal, and any cells from the entire series may be used, and thus a great saving of the Battery and uniform wear of same are obtained. It contains also an automatic Rheotome, for giving interrupted Galvanic currents. The polarity changer, or commutator, is of substantial make, has rubbing contacts, and keeps in order. The German silver wire Rheostat has coils from 5 ohms to 5000 ohms resistance each, the entire resistance of all the coils being 17,000 ohms, and by means of this Rheostat and the Milliampere Meter the resistance of the patient's body may be measured, or the condition of the cells tested. The water Rheostat is to be used to modify the current gradually. The cabinet also includes the DuBois-Raymond style of Faradic apparatus. The secondary coil can be removed and coils of various sizes and lengths of wire may be used, and the various qualities of current obtained. It is provided with a slow and rapid Rheotome, and also with a contact key, to be operated by the finger—a great help in diagnosis. The instrument, also, is furnished with our Milliampere Meter, for measuring the current strength. The case contains two small closets with beveled glass doors, two large drawers and a sliding shelf, available as a desk. The lower part has doors in the back, as well as in the front, making the cells accessible and easy of inspection. We furnish with this apparatus an assortment of Electrodes. With the Ranney Cabinet we furnish a set of Engelmann's coils.

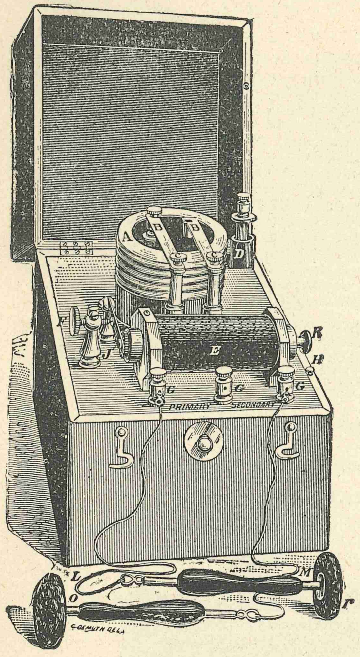
Price, complete $260 00

THE MUNDE CABINET.

40 Galvanic cells, 4 Faradic cells $160 00

See page 393. Send for full description.

WAITE & BARTLETT MFG. CO., NEW YORK.



FAMILY FARADIC. NO. 22.

These batteries are made in solid oak or mahogany case, and the workmanship is of the highest order. For durability and cheapness they have no superior.

Price, including Cords and Handles..........$10 00

PHYSICIANS' FARADIC. NO. 23.

Price, including Cords and Handles, No. 2....	$20 00
Price, including Cords and Handles. No. 3....	27 00
Price, including Cords and Handles, No. 4....	28 00

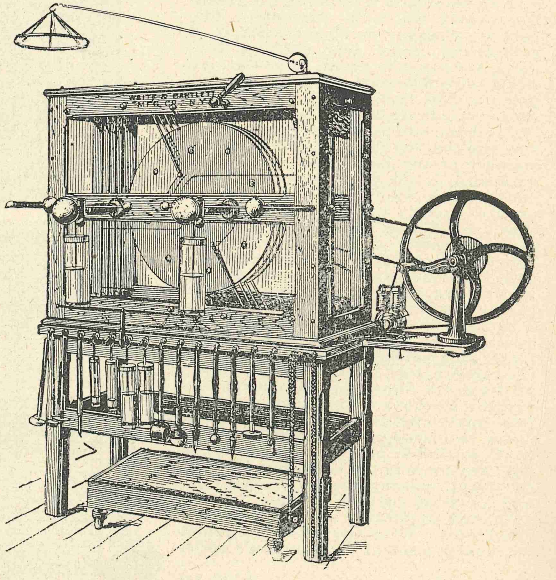
ENGELMANN FARADIC BATTERY. NO. 21.

This Battery is constructed after the data given in "The use of Electricity in Gynecological Practice," by G. J. Engelmann, M. D., of St. Louis. It is provided with 3 coils of different sized wires, and of different lengths. The effects of these three coils are markedly different.

These three coils are marked respectively: Coarse, fine and medium, as C, F and M. The diameter and length of wire on each coil is also marked in millimeters and meters. Either of the three coils may be used according to the effect it is desired to produce. Use coarse coil for muscular contractions—as for contracting down a subinvoluted uterus with medium speed of interruptions. Use fine coil to relieve pain, as in cellulitis; use medium coil when muscular contractions are to be produced, but the parts are too sensitive to allow use of coarse coil. *See page 393.*

HOLTZ INDUCTION MACHINE.

(As Improved by PROF. A. L. RANNEY, M. D.)



SELF-CHARGING STATIC MACHINES, FOR THERAPEUTICAL USE.

With six 26-inch revolving plates and set of electrodes, set of medical Leyden jars, with attachments for giving the induced current, and insulated platform.

Height, 63 inches; width from back to pole pieces, 36 inches; total length, 72 inches.

Price, complete, in handsome antique oak or mahogany cases, ...$400 00

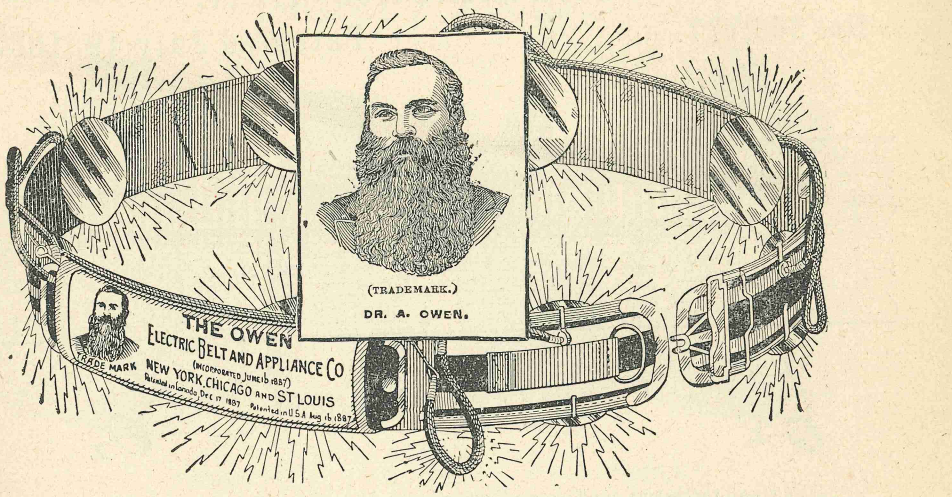
See page 392.

Our instruments are made of carefully selected material, and are warranted as represented in every respect. We received the only award for improved Static machines and improved Faradic apparatus, at the World's Columbian Exposition, at Chicago, 1893.

Send for Complete Catalogue of Electrodes, Accessories, etc.
WAITE & BARTLETT MFG. CO., or

DETROIT PHARMACAL COMPANY.

THE OWEN ELECTRIC BELT AND APPLIANCES.


(TRADEMARK.)
DR. A. OWEN.
TRADE MARK
THE OWEN
ELECTRIC BELT AND APPLIANCE CO
(INCORPORATED JUNE 16 1887)
NEW YORK, CHICAGO AND ST LOUIS
Patented in Canada, Dec 17 1887
Patented in U.S.A. Aug 16 1887

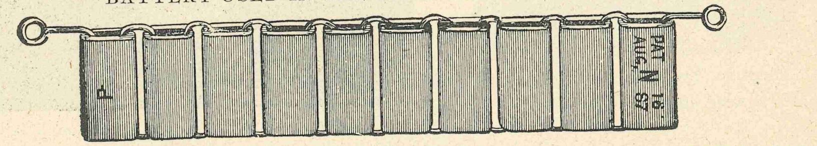
PRICE LIST OF DR. A. OWEN'S ELECTRO-GALVANIC BELTS AND APPLIANCES FOR MEN AND WOMEN.

No. 1 Belt	$ 6 00
No. 2 "	10 00
No. 3 "	15 00
No. 4 "	20 00
No. 1 " with Spinal Appliance	10 00
No. 2 " " " "	15 00
No. 3 " " " "	25 00
No. 4 " " " "	30 00
Bands ...each	2 50
Silk Suspensory	1 00
Insoles	1 00
Extra Appliances for No. 3 and No. 4 Belts (Neck Band, Wrist Bands and Foot Plates)	6 00

(In ordering give waist measure just above the hips.)

We wish to call the attention of physicians to the usefulness of our Electric Belts in cases where, for lack of time or money, patients are unable to get the treatment by Electricity which they so often need. The Batteries of the Owen Electric Belt are the lightest, and also the strongest, ever made. Each Battery consists of ten Galvanic Cells. The Batteries for the No. 1 and No. 3 Belts have 1x1¼ inches of zinc surface to each cell, while the Batteries for No. 2 and No. 4 Belts 1x1¼ inches square surface to each cell. The Battery is so arranged that, by reversing the Battery in the pocket, the current is reversed, and, with a clamp spring, any number of cells can be used. In Chronic and Nervous Diseases the Owen Electric Belt has no equal A discount of 25 per cent. will be allowed to all physicians who order direct from us. Orders will also be received through druggists or surgical instrument dealers. Send for Illustrated Catalogue

BATTERY USED IN THE OWEN ELECTRIC BELTS.



THE OWEN ELECTRIC BELT & APPLIANCE COMPANY,
201 to 211 State St., Cor. Adams (the Owen Electric Belt Building),
CHICAGO, ILL.

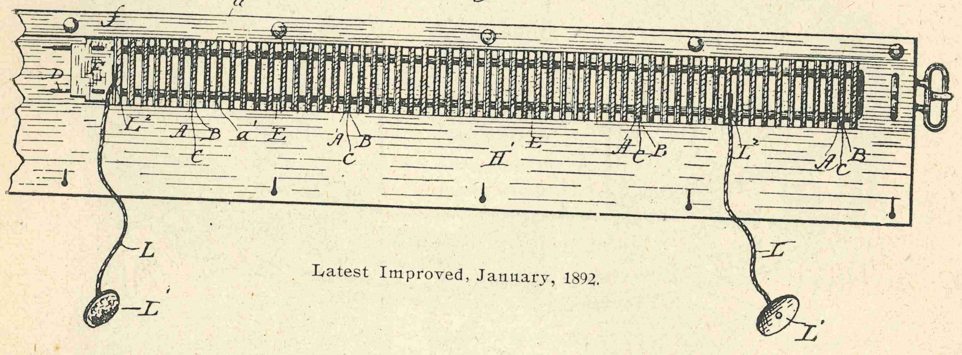
CANADIAN OFFICE: 49 King St. West, Toronto, Ont.

FOR SALE BY DETROIT PHARMACAL COMPANY.

Judd Electric Belt.

No. 366,777. Patented July 19, 1887.

Fig. 1


f
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L'

Latest Improved, January, 1892.

The above represents my Electric Battery connecting each cell and combining all into one complete Battery. By this combination a Battery can be made of any strength. They are so made and joined together as to be flexible, so the Battery can be used inside of a Belt. The cells are so arranged that they give free access to the air, and will not corrode nor polarize.

All other genuine Batteries that are used with Belts are joined together by hinge connections, and by asking any Electrician you will find that by a hinge connection from one third to one-half of the current of Electricity generated is lost, and all other Belts made have only from 10 to 20 cells, while mine has from 30 to 70, and, furthermore, each cell is double, so that it will wear twice as long as any other Belt and Battery made. Any other Battery made on any other principle in order to produce the same amount of Electricity would have to be from four to five times as long, and about ten times heavier.

One of the most wonderful points of these Batteries is that they only weigh from 3 to 5 ounces and generate five times the current of Electricity of any other made, and will last four years.

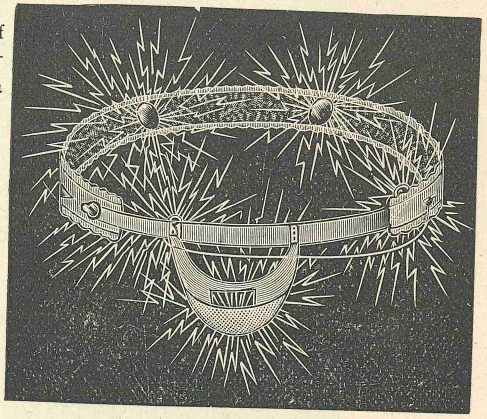
This Belt is made of the best quality of silk and chamois, has a Net Electric Supporting Suspensory, 4 Electrodes and a 70-cell Battery.

ELECTRIC BELTS.

No. 1.	28-cell, 2 Electrodes		$3 00
No. 2.	40- " 2 "		6 00
No. 3.	45- " 2 "	(ladies')	10 00
No. 4.	70- " 4 "		15 00

Discount to Physicians, 25 per cent.

Electric Trusses, Belts, etc., send for Descriptive Catalogue to——



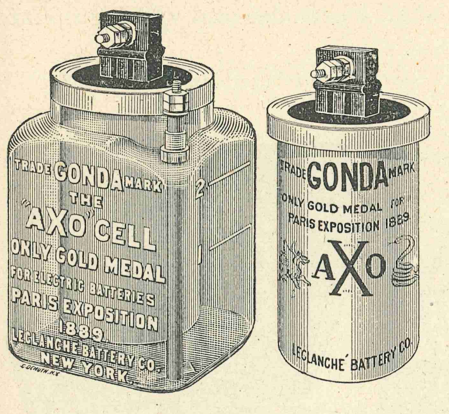
No. 4.

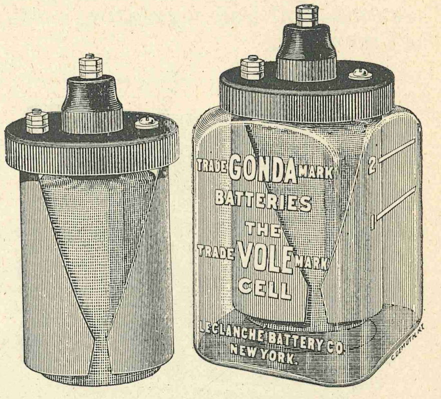
THE JUDD ELECTRIC COMPANY,

270 West Fort Street.

TRADE SUPPLIED BY DETROIT PHARMACAL COMPANY.

Battery Cells.


TRADE GONDA MARK
THE
AXO CELL
ONLY GOLD MEDAL
FOR ELECTRIC BATTERIES
PARIS EXPOSITION
1889
LECLANCHE BATTERY CO.
NEW YORK.
TRADE GONDA MARK
ONLY GOLD MEDAL FOR
PARIS EXPOSITION 1889
AXO
LECLANCHÉ BATTERY CO.

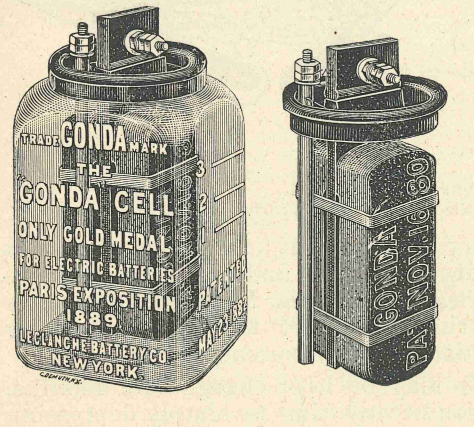

TRADE GONDA MARK
BATTERIES
THE
TRADE VOLE MARK
CELL
LECLANCHE BATTERY CO.
NEW YORK.

"AXO"

1 cell, complete	net	$1 00
10 cells, complete	each, net	75
Porous Cup	net	65
Glass Jar	each, net	15
Zinc	net	08

"VOLE"

1 cell, complete	net	$1 35
10 cells, complete	each, net	1 10
Cup	net	65
Glass Jar	net	15
Jar Cover	net	15
Zinc	net	08


TRADE GONDA MARK
THE
GONDA CELL
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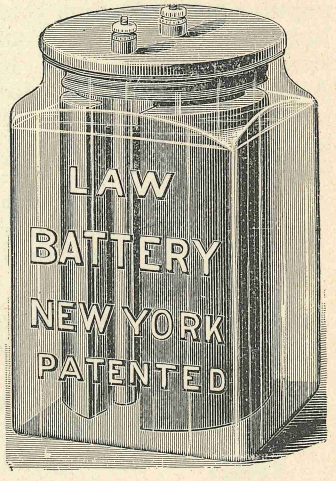
FOR ELECTRIC BATTERIES
PARIS EXPOSITION
1889
LECLANCHE BATTERY CO.
NEW YORK.
GONDA
PAT. NOV. 1880


LAW
BATTERY
NEW YORK
PATENTED

"GONDA"

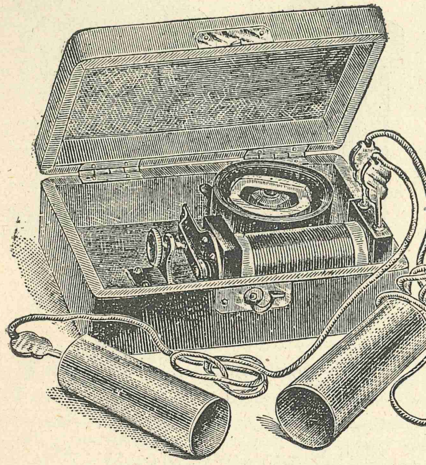
Complete Cell		$1 00
"Gondas,"	per pair	60
Jar Cover		08
Carbon		15
Zincs	each	08
Rubber Bands	per pair	04

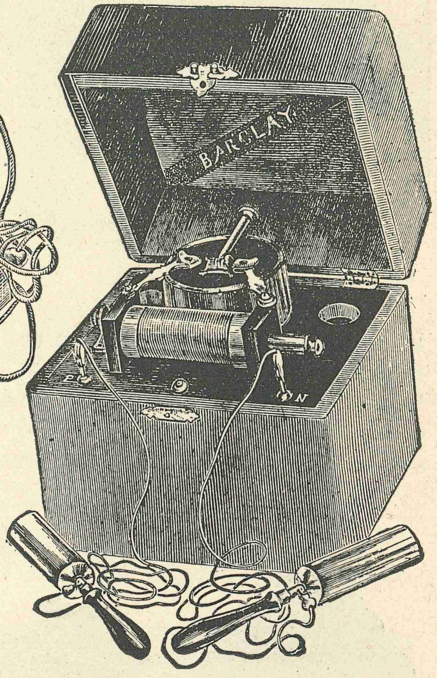
Law Cell complete	$1 25
Double Cylinder	75
Jar	30
Cover, with Rubber Rings	20
Zinc, with Fenders	10
Zinc Binding Post	08
Carbon Binding Post	15

Pocket Battery.

Complete polished mahogany box, 4¼ x 3 x 1½ inches, with zinc, carbon, coil and regulator, cords, shell electrodes and vial bisulphate of mercury.

Price..$ 2 25





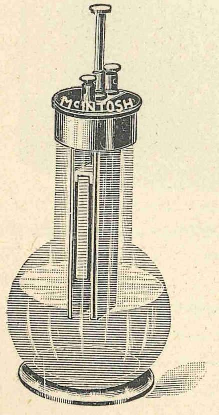
FAMILY FARADIC BATTERY.

For physician's or household use. An excellent machine at a popular price. Patent Hydrostat, hinged rod, silk covered cords and shell electrodes with handles. All metal parts nickel-plated and burnished. In handsome polished wood case. Size, 6½ x 6 inches.

Price, ...each $5 00

GRENET BATTERY CELLS.

Metal parts nickel-plated. With French carbons.



This battery occupies but little space, furnishes a large quantity of current, and is especially adapted for experimental purposes, for running electro-medical batteries, especially those that are now worked with bisulphate of mercury.

The battery may be kept charged for months, and set in action at any time by simply depressing the nickel-plated rod which slides through the center of the cover. When not in use, raise the zinc above the fluid, by means of the above mentioned rod.

			Extra Parts.	Carbon.	Zinc.	Jars.
No. 1.	6 in.	Capacity ½ pt.......net	$2 00	$0 25	$0 20	$0 50
No. 2.	8 in.	" 1 pt.......net	2 50	35	25	60
No. 3.	10 in.	" 1 qt.......net	3 50	45	30	75
No. 4.	12 in.	" 2 qt.......net	5 00	60	40	90

DIRECTIONS FOR MAKING BATTERY FLUIDS.

Any one of the following different formulae will answer well for the manufacture of fluid for batteries of the zinc-carbon type, though preference is given by most practitioners to Nos. 1 and 2.

GALVANIC AND FARADIC.

No. 1. . Sulphuric acid (commercial), 18 fluid oz.; powd. bichromate of potass., 14 oz.; water, 112 fluid oz.; bisulphate of mercury, 14 drachms. Dissolve the bisulphate of mercury in the water, then add the bichromate of potass. When dissolved, pour in the sulphuric acid and allow the liquid to cool, as the mingling of the acid and water produces heat; if the mixture is used when warm it injures the battery.

The bisulphate of mercury keeps the zincs well amalgamated.

No. 2. Dissolve four (4) ounces of bichromate of soda in one (1) quart of hot water, in an earthenware or glazed iron vessel. When cooled off, add to it four (4) fluid ounces commercial sulphuric acid and one-half (½) ounce bisulphate of mercury. Mix well. The addition of bisulphate of mercury, while it may be dispensed with, tends toward improving the condition of the zinc plates.

No. 3. Dissolve one and a half (1½) ounces of bichromate of potassium in twenty-four (24) fluid ounces of hot water, in an earthenware vessel and add to it three-fourths (¾) ounces of saltpetre. Allow it to cool to the temperature of the air, and add three (3) fluid ounces of commercial sulphuric acid. When cold again, add a solution of one-half (½) ounce of bisulphate of mercury in three (3) fluid ounces of cold water, with a little sulphuric acid added to it. This quantum will yield one quart of the battery fluid and should not be used until cold.

No. 4. Into one gallon of water put eight ounces of commercial sulphuric acid, stir thoroughly and add eight ounces of pulverized bichromate of potash, stir thoroughly until it is all dissolved. Use when cool.

CAUTERY.

No. 5. Dissolve one (1) pound (avoirdupois) of bichromate of potash in one (1) gallon of boiling water, and when cold add twenty-four (24) fluid ounces of commercial sulphuric acid. When this is cold, add eight (8) fluid ounces of a saturated solution of nitrate of ammonium in nitric acid, and add a solution of one and a half (1½) ounces of bisulphate of mercury in one (1) pint of cold water. Use the fluid when cold; it will, if made up in quantity and bottled, keep for any length of time.

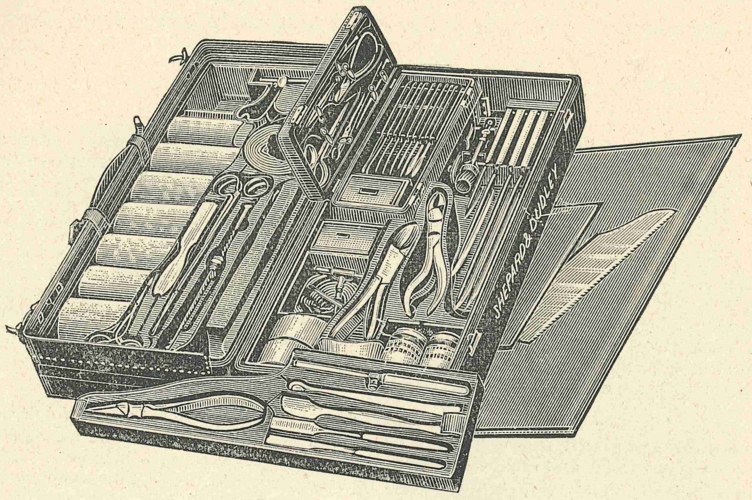
No. 6. Dissolve sixteen (16) ounces of bichromate of soda in one (1) gallon of hot water in an earthenware or glazed iron vessel. When cooled to the temperature of the air, add to it eighteen (18) fluid ounces of commercial sulphuric acid and three (3) ounces of bisulphate of mercury. Mix well and use when cold.

AMALGAMATING OR MERCURY SOLUTION, SUITABLE FOR THE ZINCS OF ALL GALVANIC, FARADIC AND CAUTERY BATTERIES.

No. 7. Mix in an earthenware, covered vessel, one (1) pound nitric acid, with two (2) pounds of muriatic acid, to which add eight (8) ounces of metallic mercury. Let stand 5 or 6 hours or longer and then add three (3) pounds more muriatic acid. This solution should be kept in a covered vessel and may be used many times.

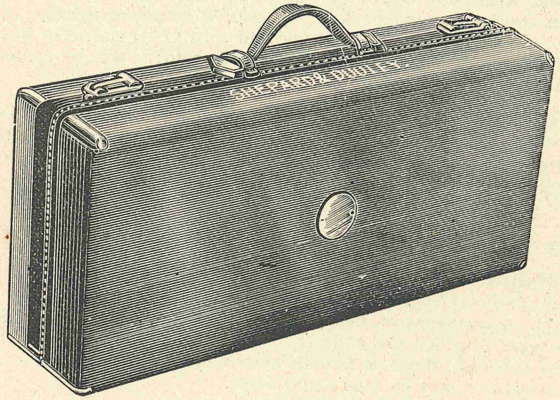
	Pint.	Quart.	5 Pints.	Gallon.
Price, Battery Fluid..................................	$0 25	$0 35	$0 60	$0 75
Price, Battery Fluid, Cautery........................	25	40	75	1 00

Capital Operating Satchel Case.



No. "T" Satchel. Open.

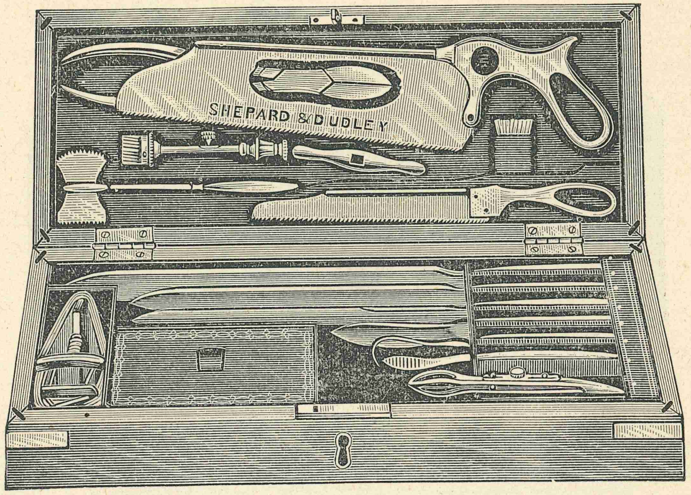
No. "T" Satchel, Capital Operating Case, closed, 18x8x5 inches, covered with heavy black leather, lined with durable light leather, metal corners; Instruments all latest Aseptic pattern, containing 1 set of Hamilton's Drills, 1 Leonard's Chisel, 1 Gouge, 1 Elevator and Raspatory, 1 Helmuth's Vulsellum Forcep, 1 American Bullet Forcep, 1 Curette and Periosteotome, 6 Pean's Forceps, 1 Box-Joint Sequestrum Forcep, 2 Leonard's Retractors, 1 Nail Brush, 1 Leonard's Amputating Saw, 1 Chain Saw, 1 Esmarch's Inhaler, 1 Esmarch's Bandage, 1 Esmarch's Flat Band, 1 Leonard's Rongeur, 1 Leonard's Bone Forcep, 1 Bottle Cat-Gut, 1 Bottle Carbolized Silk, 1 Loop-Handle Trephine, 1 long Amputating Knife, 1 medium Amputating Knife, 1 short Amputating Knife, 1 medium Catlin, 1 Shield's Scalpel. The Minor Case contains, 1 Aseptic Thumb Forcep, 1 Director and Tongue Tie, 1 Needle Holder, 1 Curved Scissors, 1 Straight Scissors, 1 Fenestrated Artery Needle Forcep, 1 pair 7-Inch Silver Probes, 1 pair Nealton's Bullet Probes, 1 Smooth-Handle Metacarpal Saw, 2 Scalpels, 1 Straight Sharp Bistoury, 1 Tenatome, 1 Curved Sharp Bistoury, 1 Curved Blunt Bistoury, 1 Hernia Knife, 1 Tenaculum, 1 Aneurism Needle.



Closed.

Price, complete, including Minor Case ....$ 100 00.

Amputating Cases.

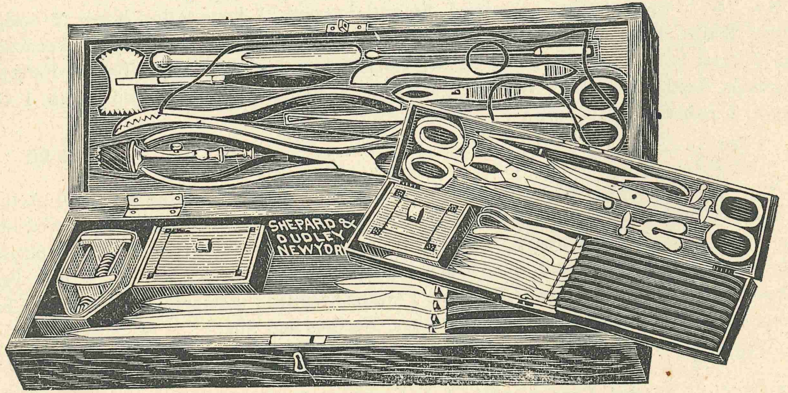


No. "R"

No. "R" Amputating Case, Aseptic, in cherry case, metal corners, leather-lined, all instruments metal handles and quality guaranteed, containing 1 long Amputating Knife, 1 medium Amputating Knife, 1 medium Amputating Catlin, 1 large Amputating Scalpel, 1 large Tenaculum, 1 Amputating Saw, 1 Hey's Trephining Saw, 1 Metacarpal Saw, 1 Trephine Elevator, 1 Conical Trephine, Brush for Trephine, 1 pair Bone Forceps, 1 pair Needle and Artery Forceps, 1 Tourniquet, Needles and Silk.

Price $30 00

ASEPTIC GENERAL OPERATING CASE.



No. "S."

No. "S" Rosewood Case, highly finished, leather-lined, knives on metal rack, minor instruments in separate case removable, made of alligator leather and leather-lined, instruments all metal, aseptic and guaranteed; contains 1 large Amputating Knife, 1 medium Amputating Knife, 1 medium Amputating Catlin, 1 large Amputating Scalpel, 1 improved Aseptic Amputating Saw—detachable back and handle, 1 Hey's Trephining Saw, 1 Conical Trephine, 1 Trephine Elevator and Raspatory, 1 Bone Chisel, 1 pair Bone Forceps, 1 pair Sequestrum Forceps, 1 pair Tenaculum Forceps, 1 Needle Holder and Artery Forceps, 1 Tourniquet. The Minor Operating Case contains 1 large and 1 small Scalpel, 1 Finger Knife, 1 Tenatome, 1 Curved Sharp Bistoury, 1 Curved Probe Pointed Bistoury, 1 Tenaculum, 1 Hernia Knife, 1 Aneurism Needle, 1 Metacarpal Saw, 1 pair Straight Scissors, 1 pair Curved Scissors, 1 pair Thumb Forceps, 1 pair Tait's Artery Forceps and Needle Holder, 1 Grooved Director and Tongue Tie, 1 pair Silver Probes, Needles and Silk.

Price $50 00